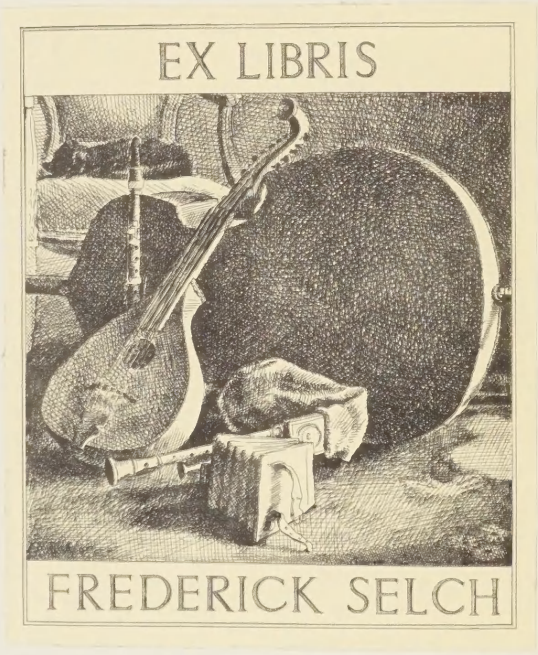
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The

Theory and Practice

of fingering the

VIOLONCELLO

containing

RULES & PROGRESSIVE LESSONS

for attaining the Knowledge & Command of the Whole compass of the Instrument

by

John Gunn

Teacher of the Violoncello.

O deeus Phoebi, et dapibus supremi
Grata testudo Jovis, o laborum
Dulce lenimen, mihi cunque salve
Rite vocanti.

——— ac precor, integra
Cum mente, nec turpem Senectam
Degere, nec Cithara carentem. Hor.

The Second Edition.

Pr. 15s

London Printed for the Author, & sold by him at No 1 Bennet Street, Rathbone Place and by Preston at his Wholesale Warehouses, 97 Strand.

——— where may be had by the same Author ———

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The Art of Playing the German Flute on New Principles	Price	10	6
Also The School for the German Flute Part 1st		5	
Forty Scotch Airs with fingering marked for the Violoncello		7	6

INTRODUCTION.

The entire body of Examples in the former edition, remain as they stood before, with the addition of a few remarks, and some corrections made. These examples compose what is in this edition, called the Appendix. To the historical dissertation on the invention and improvement of stringed instruments; and to the geometrical and other minute explanations of the system of fingering, which preceded these examples, is now substituted a more simple mode of explanation, illustrated by such familiar examples, as it is hoped, will, besides all the advantages of an easy, pleasing and progressive practice, gradually unfold the theory of the general system with sufficient perspecuity.

The first practice of this instrument, more than that of any other, is rendered dry, and unentertaining to the Learner, and his progress greatly retarded by the want of lessons properly adapted for his private study, which, while they might entertain him by their beauty, and give him fresh stimulus by their variety, might at the same time, by their simplicity and a judicious arrangement, be the means of his getting over the chief difficulties of the instrument.

With this view, the Author has presumed that the Learner will have a better means of judging of, and correcting his performance, by the practice and study of well known and favorite Airs, than by that of lessons or Sonatas, the time, accents, and meanings whereof must be to a beginner, to say the least, comparatively more obscure. Nor is it meant that his practice with a master or friend, should be confined to this: With such opportunities, the practice of the best music that can be procured, in every variety of stile, in two three or more parts, will be his surest and shortest road to excellence. There is indeed a refinement of tone and expression necessary to an elegant performance of melody or air, which can only be attained by being long coversant with a variety and progression of melodies, and the different expression which mark their characters. This, while it is one of the greatest difficulties, is certainly the most valuable and best suited to the powers of the instrument, and will also lead to the possession of its other great property of fine and expressive accompaniment; for whence can be derived a better idea of what the latter should be, than from the study of melody itself?

A knowledge too, of the fundamental principles of harmony, will not only contribute to the easier attainment of both air and accompaniment, but will also discover properties and effects in this instrument, which will be a new and inexhaustible source of entertainment, distinct from the performance of any written music. As the author of the present treatise knows of no publication that even professes to teach, or apply these principles to the violoncello, the favorable reception the former edition of this work has met with, has encouraged him to hazard a still more arduous undertaking, in order to supply that want in some degree: and he will venture, in a short time, to submit his labours to the publick on the study of harmony, or principles of thorough bass and modulation, adapted to the violoncello, and on the study of melody from princi-

ples,

ples, and the practice of the best vocal and instrumental airs progressively arranged.✦

In the course of this intended work, the Author will have occasion to refer to the best publications in illustration of the principles, but more particularly to a selection of Duetts by the best masters, for the violin and violoncello, which will appear at the same time, comprehending a gradation of practice, from the easiest, to what may be considered as sufficiently difficult, and illustrative of the finger board, and of the fundamental passages, the principles whereof will be found in the former work. In this selection the fingering and bowing will be particularly attended to, and refer to the rules in the present treatise; and notices will be occasionally given of the authors whose compositions these duetts will enable the Learner to perform, as he proceeds in their practice.

The rules given in this treatise for the management of the bow from §60 to §65. originated in the authors observations on the different modes of bowing, practised by the most eminent performers, not only on the violoncello, but on the violin, and in his own experience, during a period of twenty years unremitting practice, in teaching this involved part of the art; and he hopes that his description of the positions and movements of the joints &c: will, by the help of the drawings referred to, be intelligible to the Learner. The best authorities have been also consulted, but he apprehends these movements and positions have either been imperfectly explained, or have altogether escaped observation.†

✦ The first book of this work will be published in a few months under the the title of The School of the Violoncello, or an Introduction to the study of Harmony and melody, consisting of principles and practice &c.

† Tartinis letter on bowing to Madam Syrmen. Ital: & English. (Preston 97 Strand.) Simpsons treatise on the Division Viol or Viol da Gamba Lat: & Eng: 1636. but more minute than either Mr. [illegible] School for the violin German 2d. Edition. Augsburg 1769.

The THEORY and PRACTICE of fingering the VIOLONCELLO.

Of the POSITION of the INSTRUMENT and of the FINGERS.

§1. The greatest difficulty in the practice, as well as in the teaching of the Violin, Tenor, and Violoncello, more especially the latter, from its larger size, unfortunately occurs at the first outset. So many positions and movements of the hand, of the joints, and of the fingers; probably all new to the Learner, must, according to the general practice, be put in action at one and the same time. The attention being divided between such a variety of movements, it is no wonder that many of them are altogether overlooked, and the worst habits imperceptibly formed. If we add to this, that the real principles or causes producing sounds of the best quality, on these instruments, are all, excepting those relating to pitch or tune, very imperfectly or altogether unknown; it will not appear surprizing that such a diversity of effects are produced from this class of instruments, from sounds the most shocking and grating to the ear, to those that are tolerably pleasing, yet still far short of those enchanting sounds that these instruments are known to be capable of giving.

§2. The experience however of every day gives me fresh conviction not only that excellence is attainable, but that the time generally thought necessary to arrive at it, may be surprizingly shortened, by introducing more method and simplification in the mode of practice, and by a more accurate enquiry into principles, and into the different causes which concur in forming pure sounds, and occasion a facility in their execution.

§3. The mode of holding the instrument is far from being indifferent, and we see several ways adopted, which are exceptionable, from the obstructions they oppose to good tone and a facility of execution. The position which in these respects possesses the greatest advantages, is the following. The player sitting as forward as he can on a chair or stool, rather low, is to extend his left leg nearly as far as he can, so as not to rest solely on the heel, but with the foot flat on the ground; this is done in order to depress the left knee, which would otherwise oppose the proper action of the bow. The right knee must be extended a little outwards, so as exactly to receive the Violoncello between both legs, the toes of the right foot being turned quite outwards, so that the Calf of that leg which will be perpendicular to the ground, may be pressed against the upper rim or edge of the instrument, while the opposite lower edge is pressed against the lower part of the left thigh a very little above the knee, the upper rim will thus project beyond the knee, and the bridge will be on a line with the right knee,

as it is necessary the bow should pass on the fourth string in the direction of the bow, a...b at fig: 11 of the annexed plate, about three inches above the bridge; for if the instrument be held lower, the bow must be drawn on that string in the direction of the dotted line d...b. The finger board should incline to the body and towards the left shoulder, as at fig: 17.

§4. This position should be repeated several times till the Learner understand it perfectly well, and can keep the instrument steady; he may then proceed to apply the fingers of the left hand to the strings, after having prepared them to extend to the proper distances in the following manner. Let the fingers be bent into an arch like form; the first joint from their points should be nearly perpendicular to the Strings, stretch'd from each other about an inch, so that the distance from the fore finger to the furthest edge of the little finger shall be nearly four inches; the thumb resting without pressure on the back of the finger board and lying at right angles with it, and not far advanced; but so that all the fingers may proceed from one string to another very exactly in the same direction; see fig: 16. where such movement of the fingers is expressed by the dotted lines, and by the lines at fig: 11. which are all at right angles with the strings. *

§5. In this position of the hand, the fingers will be at the distance of a semitone from each other, which are the distances expressed by the contiguous dotted lines, and two of these form the distance or interval of a tone. The position at fig: 16 is perfectly calculated to measure the distance of a tone and a semitone, which in the system of music, is universally called the interval of a minor or flat third, and therefore we shall call this the MINOR position in contradistinction to the position at fig: 17. which includes two whole tones, the interval of a major or sharp third; and therefore called the MAJOR position. The position at fig: 18. formerly much in use, and originating probably from the position of the hand on the Violin, on which it is indeed the best practicable, is given as a beacon to avoid; the fingers tending to an oblique direction, as expressed by the dotted lines, cannot be corrected without very long practice, which will be entirely avoided by adopting the other positions.

§6. In this form, let the hand move across to the fourth and largest string, and at the distance of about three inches from the nut, let the first finger be put down

* I hope it will not be inferred from this, that these distances ought to be marked on the finger board, instead of assisting the ear, this would be the most effectual bar to its improvement, which is to be overcome by its own exercise in judging of and correcting sounds produced, and in comparing them with each other.

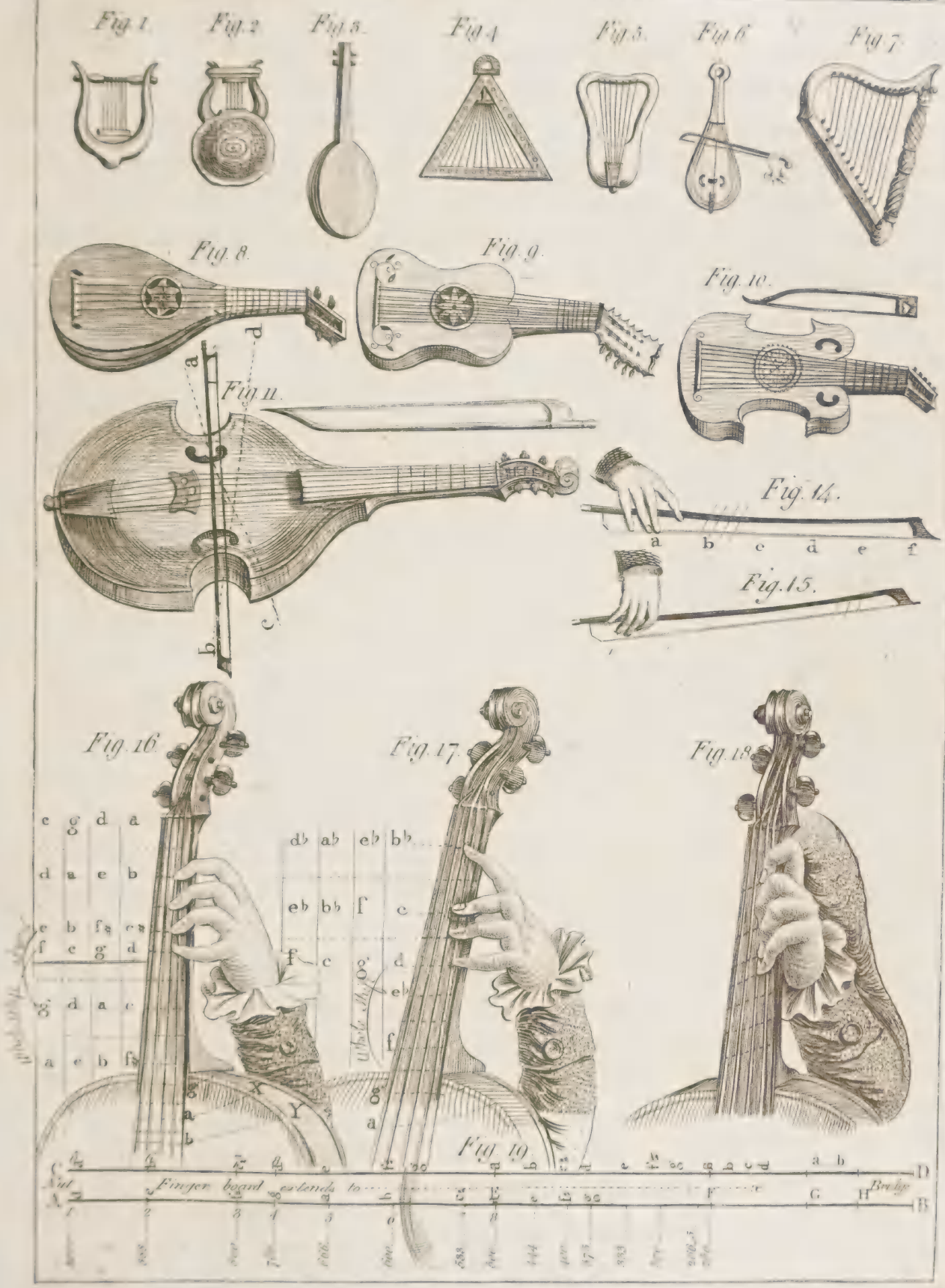
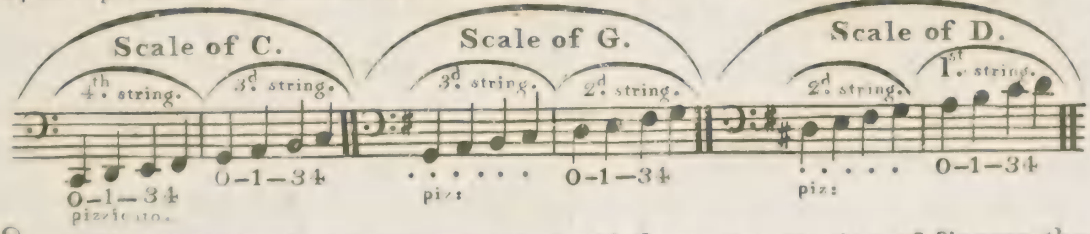


Fig. 1.
Fig. 2.
Fig. 3.
Fig. 4
Fig. 5.
Fig. 6
Fig. 7.
Fig. 8.
Fig. 9.
Fig. 10.
Fig. 11.
Fig. 14.
Fig. 15.
Fig. 16.
Fig. 17.
Fig. 18.
Fig. 19.
Finger board extends to
Nut
Bridge

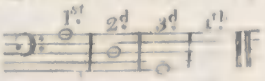
and pressed against the string; then keeping the second and third fingers bent and stretched at their due distances, press down the third finger on the string, but not the second, tho it may lie on it; afterwards press down the little finger at its proper distance; this being done, examine whether all the fingers and the whole hand have kept their position; Compare it with fig: 16. and correct any inaccuracy; then proceed to take off the little finger, but still preserving its form and distance, and afterwards in the same manner take off the third and first fingers successively, and without quitting the thumb, endeavour to keep the fingers bent and separated as when on the string, at a very litte distance above it, very steadily for a few seconds; by this means they will acquire, in a short time, the accuracy of compasses; and the Learner may rest assured that a few minutes occupied in this, will greatly facilitate his future progress, and that he will thereby strengthen, and acquire a more accurate command of his fingers, than by an injudicious practice of several months.

§7. He may now inspect the first column of letters, c, d, e, f; at fig: 16. the Violoncello being supposed to be in tune,* and striking the open fourth string with the first finger of the right hand, as on the harp or guitar, it will give C, the lowest sound of the instrument; the hand being now in the proper position and the first finger pressed down; the string struck as before will give the note d, as marked opposite to that finger in fig: 16. and in like manner the third and fourth fingers will give the sounds e, and f; then moving the hand to the next string, which being struck open, it will give the note g, the first of the second column, and by putting down the first, third and fourth fingers successively, the remaining three notes a b and c, opposite to these fingers will be produced. And thus we have the natural or diatonic scale of C, as represented in musical notes in the two first bars of the following example.

Ex: 1.

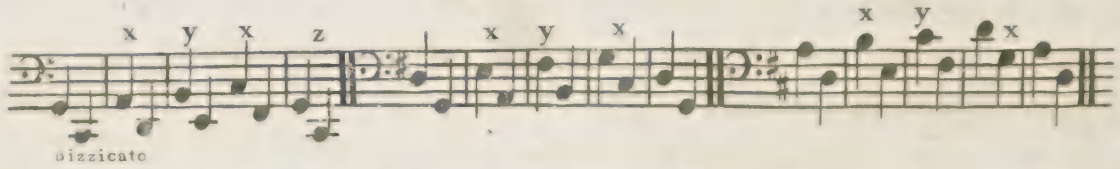


§8. Precisely in the same manner, and with the same extension of fingers, the remaining two scales in the above example are performed; that of G. on the third and second strings, and that of D. on the second and first strings; the letters by which the notes are named are purposely omitted under the notes, that the learner may sooner attain the knowledge of their names without such assistance. See the scale of G. in the

* It may at first be tuned to the A, D, G, and C, of a harpsichord thus 

second and third column of fig: 16. viz: g_a_b c; d_e_f♯g. And that of D, in the third and fourth column, viz: d_e_f♯g; a_b_c♯d. The distance of a tone is marked above by a short line between the figures or letters; and the semitonic interval, by an omission of the line, thus a_b_c♯d means, that two tones and a semitone are to be taken, 0_1_34. And in order to read all the intervals with certainty let the following inversion of the above scales be played pizzicato.

Ex: 2.



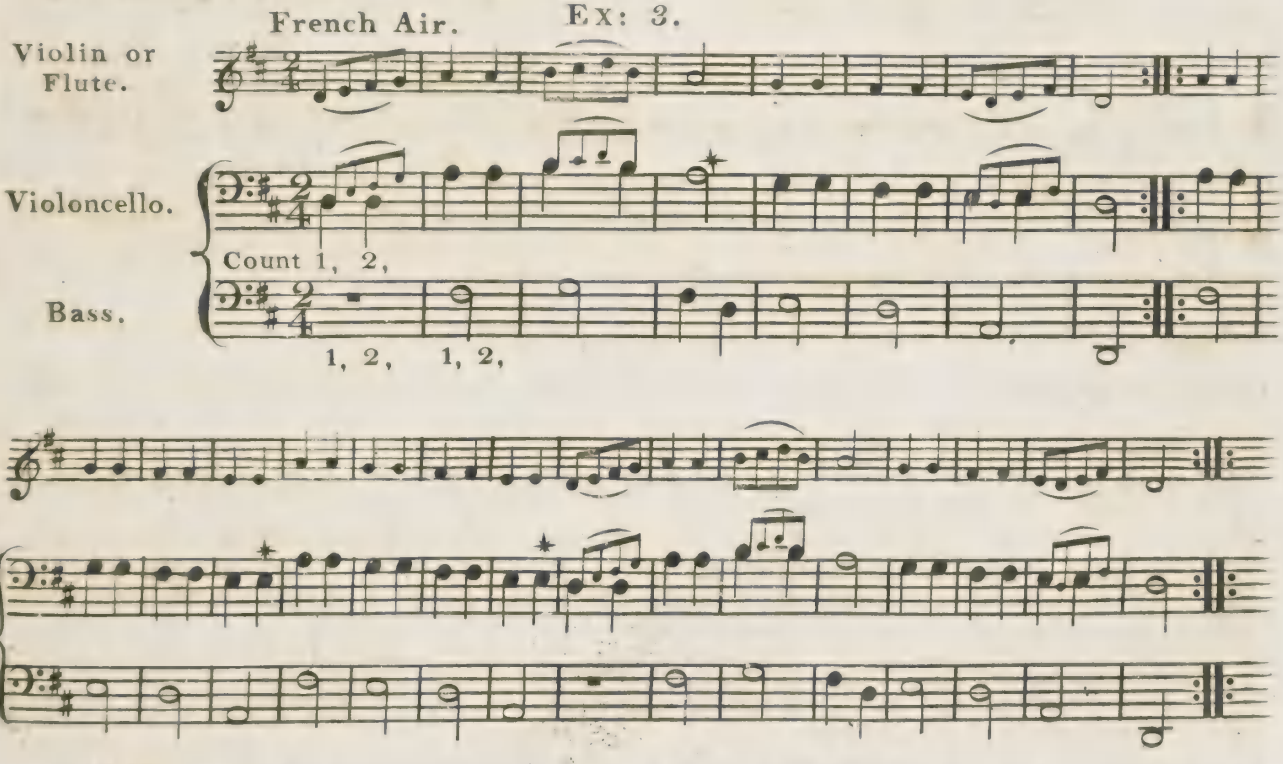
§9. The above notes are at the distances or intervals of fifths descending; and sixths ascending, the former are taken by moving the same finger only to the next string, or by placing the finger across both strings at the same time; but this way is not so practicable for the third finger. The Learner may observe at xx, that all notes in the spaces are taken with the first, or fourth finger, while those on the lines are the open strings, or taken with the third finger. Such observations, associating the idea of the written characters with that of their places on the finger board, will prevent many mistakes, and tend to an early and perfect knowledge of the musical system, and of its execution on the instrument; there being in fact nothing throughout to be learnt, but intervals or distances, that is the situation of one note with respect to the foregoing, or following, which are to be taken with the least possible change of position or unnecessary lifting up of the fingers, even in passing from one string to another, for instance, in the above example at x y the first finger is to remain on the fourth string, whilst the third is strtch'd from it one tone, and goes on the third string, and afterwards on the fourth; where it is to remain whilst the little finger goes to the semitonic distance on the third, and so of the others.

§10. The Learner after having understood in what manner he is to hold and manage the bow as particularly directed under its proper head hereafter,* may now proceed to the following example of an easy french air. There is a bass subjoined to the air, and above it, the same air is given in unison in the treble clef, that the learner may have it played on the violin, flute, or piano forte, while he plays the bass to it, observing to divide every bar into two equal parts or measures, which may be done by counting accurately one, two; about the time of a moderate step in marching or walking. In playing the air by himself he may at first take the more simple and longer notes, and afterwards the equivalent shorter notes written in a smaller character. It is also necessary to observe that the notes of the bass are to be played shorter than those of the air, in

* §61 to 67.

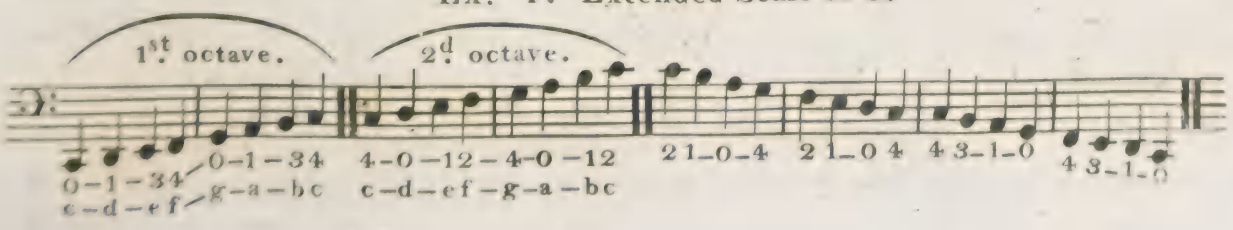
order to separate them from each other by a sensible stop, and accenting each, not unlike the pizzicato abovementioned. This manner of playing notes is meant by the technical term, Staccato. The notes of the air, on the contrary are to be played full, and connected, in the manner of singing, without any separation or stop whatever, except at the double bars, or at the end of shorter musical phrases or periods, such as take place at the stars, where some short stop is necessary; and expressed merely by shortning the last note of such periods, and stopping the remainder of its length, as in the staccato of the bass, so that the first note of the following phrase may begin exactly in time.

French Air. EX: 3.



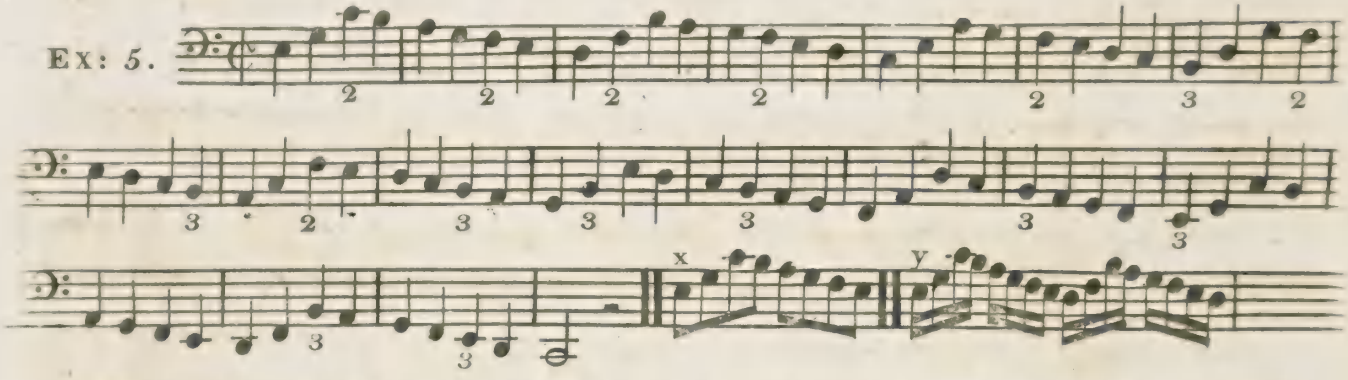
§11. It will have occurred to the learner that no use has hitherto been made of the second finger; the following scale will show, in the second octave, which is merely a repetition of the intervals of the first, that the semitonic intervals ef, and bc, which in the lower octave were taken with the fourth finger, must in the upper octave be taken with the second finger.

EX: 4. Extended Scale of C.



§12. Thus the rule will always be in fingering the key of C, for the two lower strings the first third and fourth fingers 1—34, and for the two upper strings the first second and fourth fingers 12—4. The first of these positions will be hereafter occasionally distinguished from the second by the name of the FIRST MINOR POSITION, and the second will be called the SECOND MINOR POSITION. The position of the hand fig: 16. is equally well adapted for both these varieties of a minor third. The following example may be taken as an exercise.

Ex: 5.



This may be played in any given quickness, but always so as to be uniformly conducted to the end in the time in which it is begun, and it may be gradually encreased as it becomes easy by practice, to the quickness at x, and y.

§13. It may be observed of the three scales Ex: 1; that each octave consists of two bars, which divide it into two similar parts or tetrachords, of four notes each, the intervals of which equally consisting of two tones and a semitone: and that the fingering and intervals of the three scales of C, G, and D, there given, are exactly alike, notwithstand of the sharp (♯) on F, at the clef or signature of the scale of G; and of the two sharps ♯f and ♯c, at that of the scale of D. The reason of this being once clearly understood by the Learner, he will see that all keys in the musical system, are in fact, only transposed or artificial scales, similar to, and consisting of like intervals with the natural diatonic scale, whatever sharps (♯) or flats (♭) may be at the clef of any given key. In what manner these flats and sharps arise, may be known by considering,

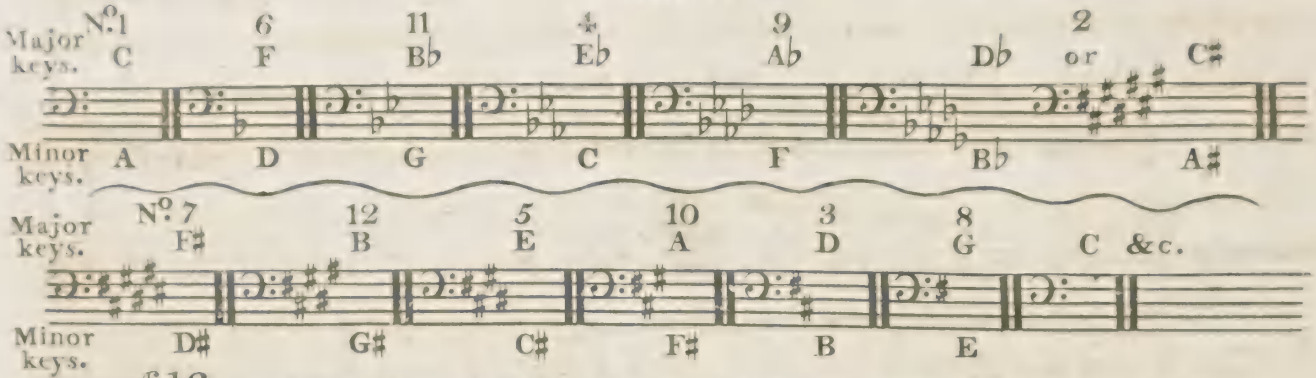
§14. That the second bar or tetrachord of the scale of C, Ex: 1. is precisely the same with the first tetrachord of the next scale of G, as expressed by the dotted lines under the third bar of that example; but that the second tetrachord of G, d—e—♯fg, is not the d—ef—g of the scale of C, nor can a semitone take place in that part of a second tetrachord of any scale: with a view therefore to enlarge that semitonic interval to a

whole tone, and of the last tone to make a semitone, the f is brought forward or sharpened a semitone, d–e–#f g the f, thus taking the appellation of f sharp (#f) which being marked at the clef becomes the signature of the key of G. Now f being the fourth note from C; and G, the new key being consequently its fifth $\frac{1\text{-}2\text{-}3\,4\text{-}5}{c\text{-}d\text{-}e\,f\text{-}g}$ this General inference may be drawn, that the fourth of a scale being made sharp or raised a semitone, makes a transition or modulation into a key which is the fifth ascending to the former key; as from C to G. and consequently the $\frac{1\text{-}2\text{-}3\,4}{g\text{-}a\text{-}b\,c}$ of the latter, being made g–a–b–#c will make a change or modulation of the scale of G, into that of D, its fifth ascending having this #c, with the former # f sharp at the clef, as at Ex: 1. In the same manner the keys of A, E, B, F#, and C#, will have respectively, three, four, five, six and seven sharps, as in the inverse order of these keys in the next example.

§15. On the other hand, if we consider the scales, as those of Ex: 1. in a retrograde order D, G, C, which is that of fifths descending, we shall find the difference of their signatures, or their transitions or modulations by fifths descending to arise from the seventh interval of one key being flattened or lowered a semitone, from its natural place, as in the second tetrachord of D descending, d c#—b—a, being made d—cb—a and this flattened seventh C, becomes a proper fourth to the next scale of G, as g–a–bc; for its first tetrachord; the other tetrachord or first bar of D, d–e–#fg remaining as before, will constitute the second tetrachord of G. Now this flattening of the seventh, which is well expressed, by the natural mark (♮) or by an omission of the sharp character (♯) when it has stood at the clef, must be differently expressed, when there has been previously no such character, as at the scale of C, Ex: 1. The seventh of that scale, which stands in the second tetrachord b natural, $\frac{5\text{—}6\text{—}7\,8}{g\text{—}a\text{—}b\,c,}$ will be flattened by removing it a semitone nearer to the sixth, which is expressed by another character called a flat (♭) and the b natural or the seventh of the scale, becomes b flat or the fourth of the next scale of F. the fifth descending from C, forming its first tetrachord f–g–ab♭, whilst its second will be the c–d–ef, of the former scale, which seventh e, will be flattened to e♭ for the next scale of B♭. the a of which will in its turn be made a flat for the scale of E♭ as at N° 6, 11, 4, &c, of the following example. and thus the rule for flats as well as sharps in keys descending by fifths, will be one flat

more, or one sharp less than the foregoing key, as will be seen in the following signatures of the twelve major and minor keys of the system.

Ex: 6.



§16. The numbers 1, 6, 11, &c. refer to the order of the semitones in the octave of the following Example, whereof the seven diatonic intervals are expressed in letters, and the places of the remaining five semitones are expressed by the figures 2, 4, 7, 9 and 11, placed about the middle of each of the tones, and these take their names according as the tone to the right is to be flattened, or that to the left sharpened; the interval 2 for instance of $\overset{1}{c}\ \overset{2}{—}\ \overset{3}{d}$; if c is to be raised, it must be called c♯, if d is to be depressed, it must be called d♭.

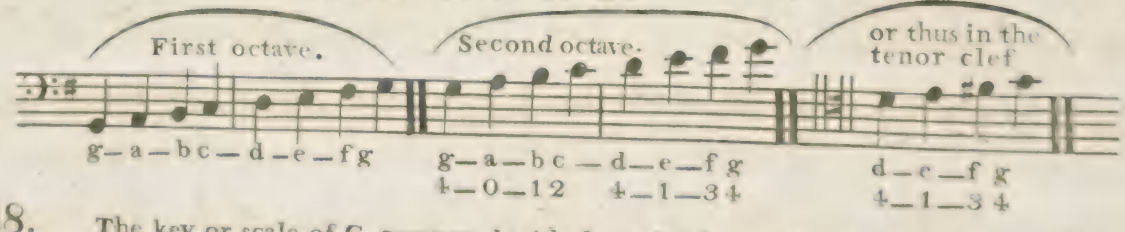
Ex: 7.

1 2 3 4 5 6 7 8 9 10 11 12
c — d — e f — g — a — b, $\overset{1}{c}\ \overset{2}{—}\ \overset{3}{d}$ &c.

§17. The key of C, Ex: 4 is the only one which has hitherto been extended beyond one octave. The keys of F, B♭ &c, will for the present be postponed, and those of G and D, of which one octave has already been explained in Ex: 1, will be extended to a second octave, and several examples given for the practice of each.

Extended Scale of G.

Ex: 8.

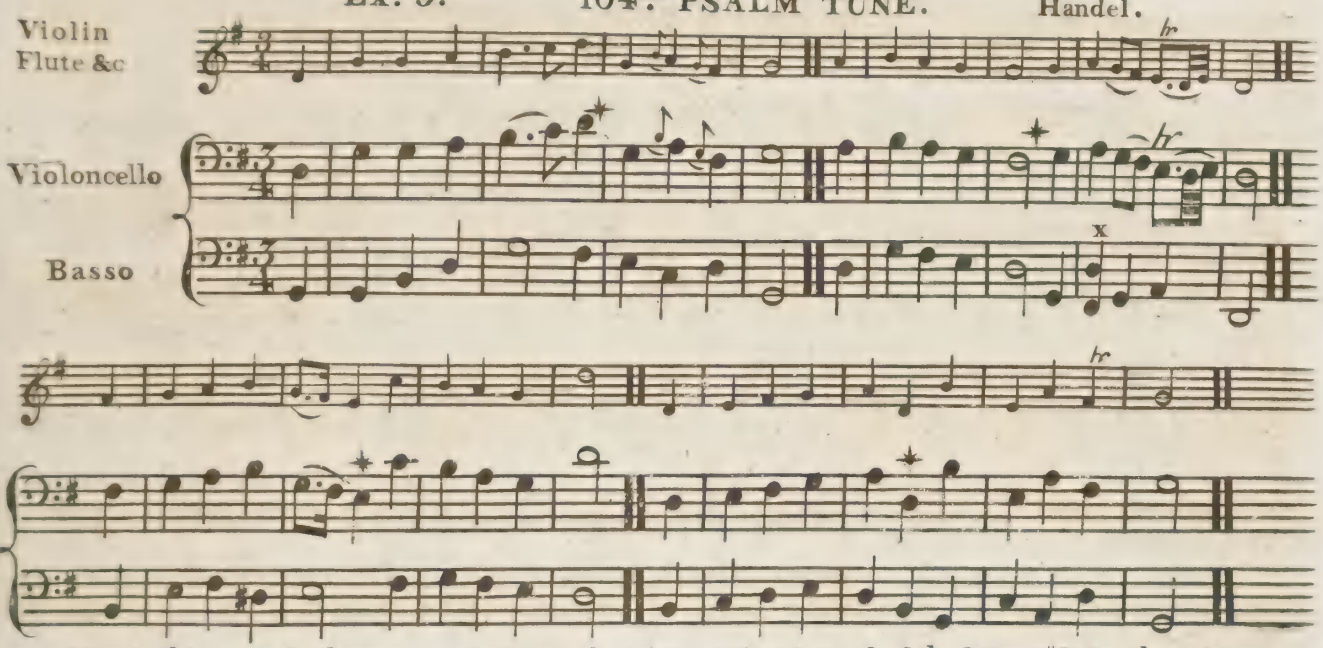


§18. The key or scale of G, compared with that of C, has its first tetrachord of each octave the same with the second tetrachord of C, Ex: 4. and in its second there is only one note different which is the ♯f or seventh of the above scale: Compared to the scale of D, its second tetrachord contains the same intervals with the first of D, d – e – ♯f g. And its second differs only from it in the c being natural g – a – b c, while that of the scale of D is sharp, a – b – ♯c d.

§19. In the second octave, the hand in its position will not reach beyond d; and for the remaining three notes the hand must be shifted, or brought down; resting on the rim of the bass, which by fig: 16 appears to be betwixt the dotted lines where ♯f is situated, and the next semitone of G; the fourth finger must be therefore extended a little beyond the rim, and the other fingers will be nearly in the form of the hand at N.o 18 supposed to be brought down to the rim of

the bass. The last tetrachord d–e–#f g is repeated in an additional bar in the tenor clef, to accustom the learner to read notes in that clef, which is used to avoid the multiplicity of lines which the continuance of the bass clef would occasion; but the tenor clef and the shift e–#f g, will be further explained hereafter, and in the mean time the following examples may be practised with or without the accompaniment of a violin, flute, or piano forte as mentioned above,

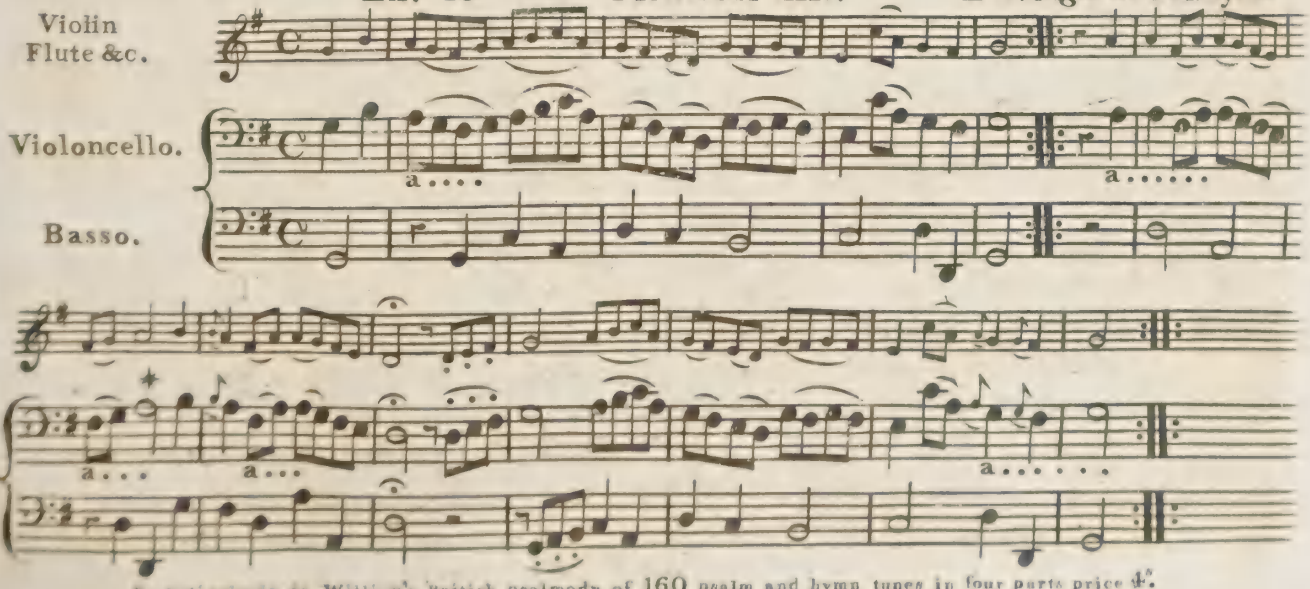
EX: 9. 104th PSALM TUNE. Handel.



At x in this example, the upper note d, may be taken at first instead of the lower #f, for the taking of which on the fourth string the fourth finger must be extended a semitone from its usual position on f natural; which will be more explained in the extended scale of D. §

§20. Many basses and melodies of equal ease and simplicity with the above are to be found in our collections of church music,* and in the basses of Glees, which may be practised with very little further knowledge of fingering.

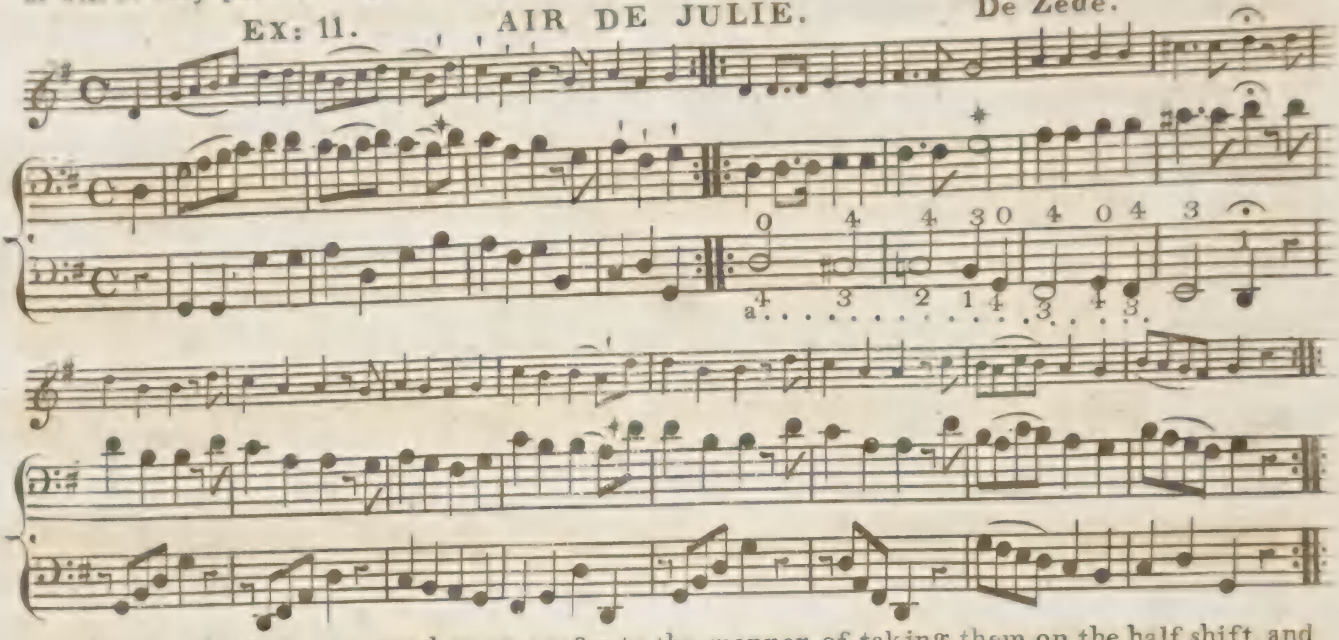
EX: 10 FRENCH AIR. L' Aveugle de Palmyre.



* particularly in William's British psalmody of 160 psalm and hymn tunes in four parts price 4s. sold by Preston № 97 Strand.

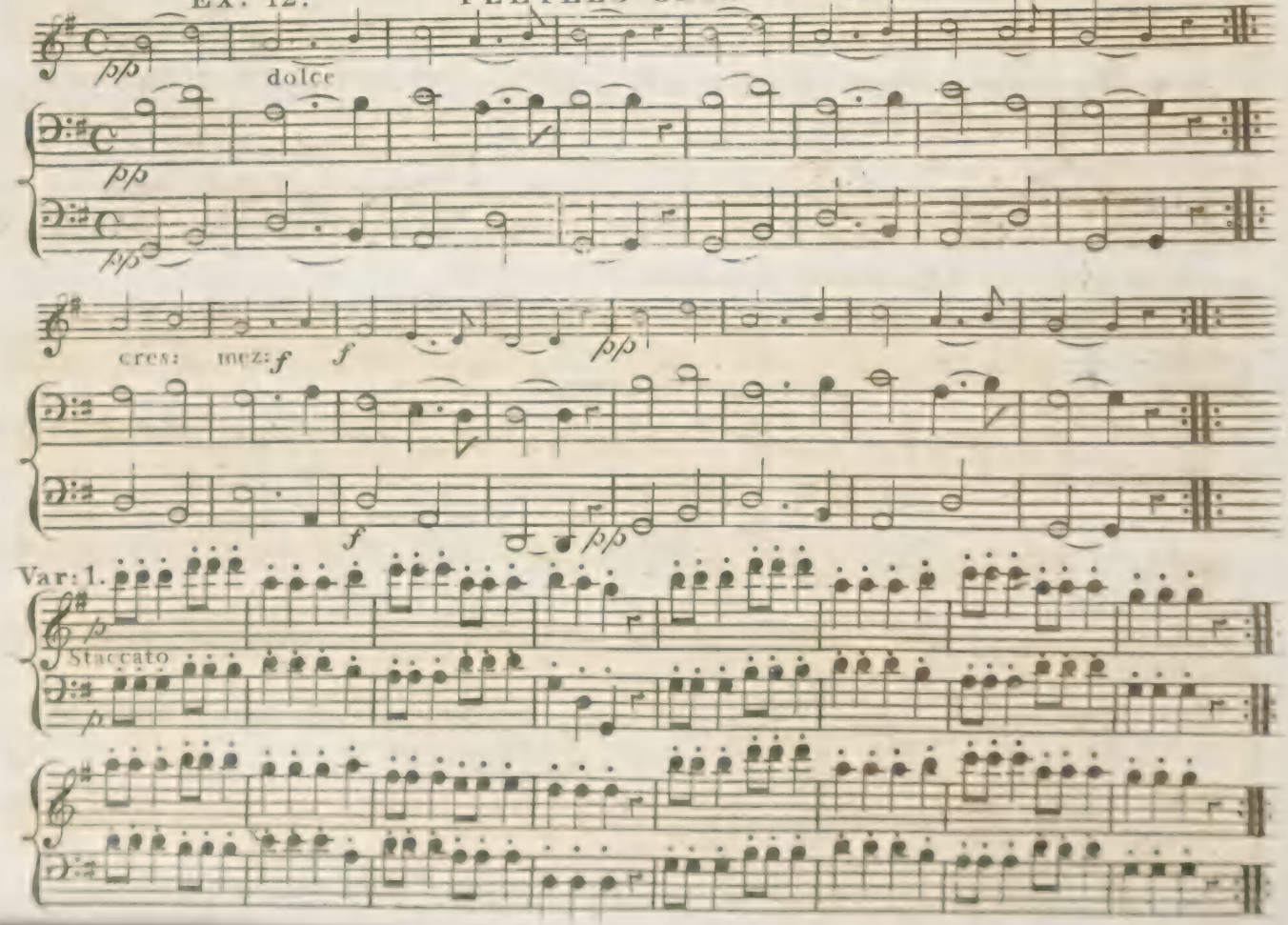
At the places marked a.... the notes may be taken at first with the open string and the common fingering of the scale, and afterwards with greater refinement and expression, as will be very particularly mentioned hereafter under the head of the HALF SHIFT.

EX: 11. AIR DE JULIE. De Zede.

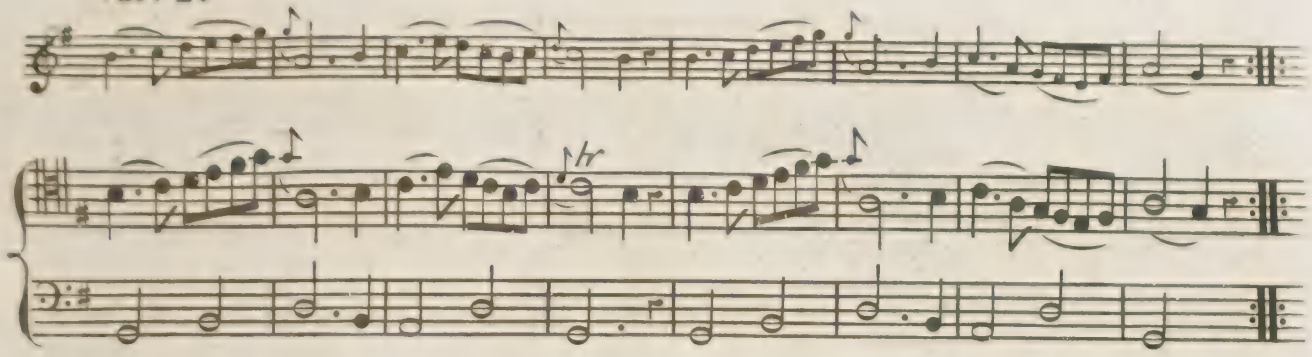


At a..... the figures under the notes refer to the manner of taking them on the half shift and those above the notes show how they may be taken in the mean time without shifting the hand.

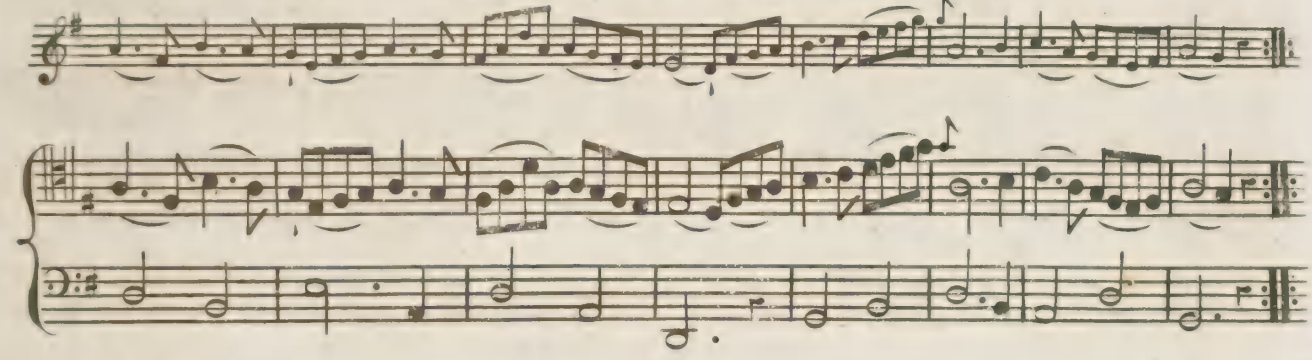
EX: 12. PLEYEL'S GERMAN HYMN. Quartettos. Op: 20.



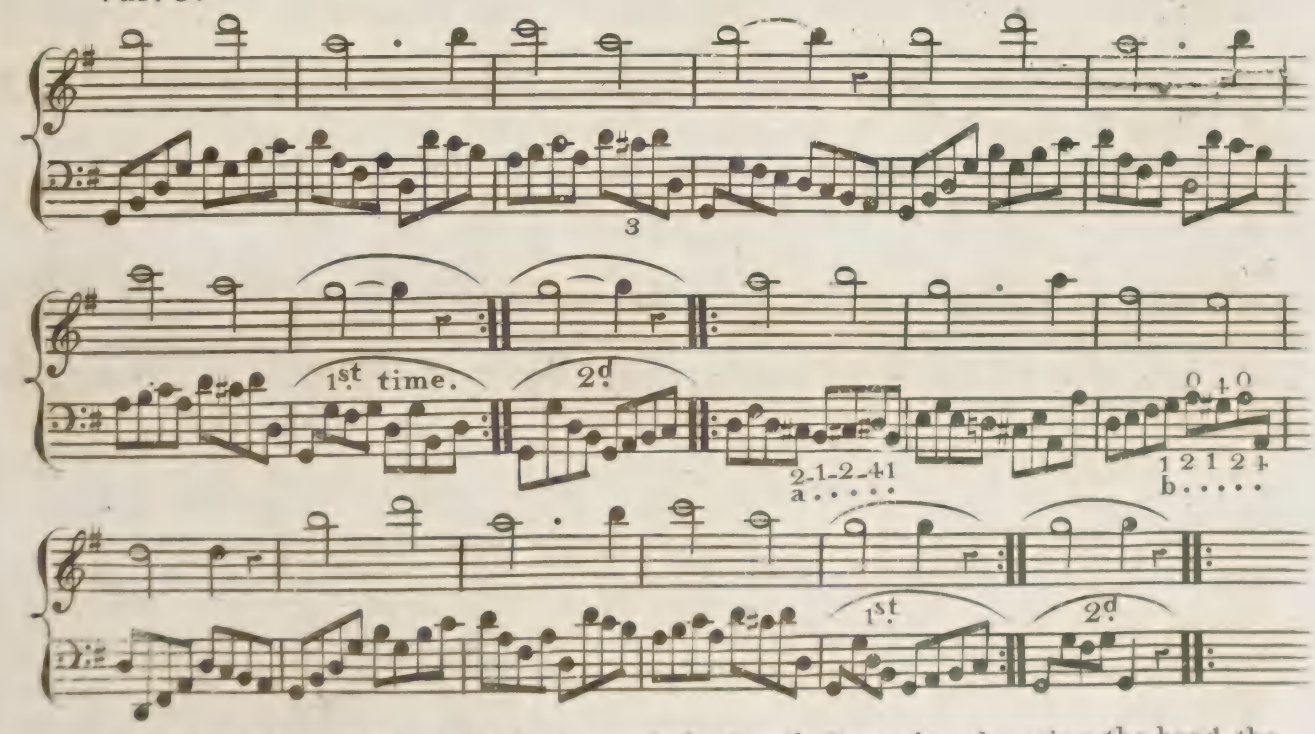
Var: 2.



This Variation is fingered, and set in the bass clef at Ex: 30.



Var: 3.



At x, the three notes e, may be taken with the fourth finger by advancing the hand the distance of one tone at a . . . . . the b–c♯–d♯ form a major third in the half shift on the third string and at b . . . . . the notes may be taken at first the Common way, and afterwards on the whole shift, both which shifts will be afterwards fully explained.

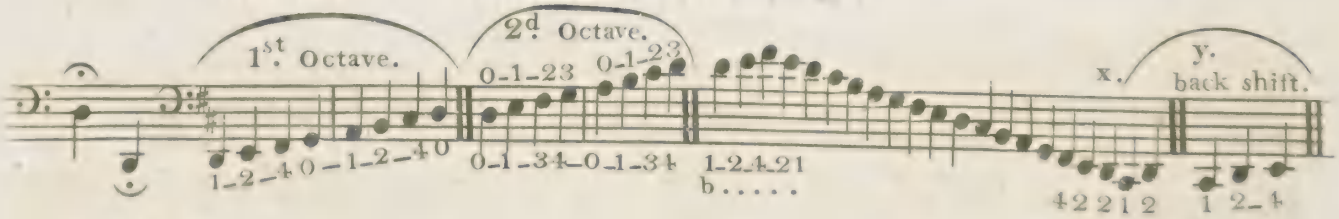
Of the MAJOR POSITION, or extension of the fingers for a major third.

§21. This position has been mentioned above §5, but has not been hitherto required in practice. the major thirds c_d_e, of the fourth string; g_a_b, of the third; d_e_♯f of the second; and a_b_♯c, of the first string being all taken by the open string, the first and third finger 0_1_3; but in all other cases of two whole tones, not beginning with the open string, as d_e_♯f of the fourth string; the first and second fingers must be separated to the distance of a little more than two inches; and the extension of the first from the fourth finger will be nearly five inches, divided by the second finger into two equal parts as at fig: 17.

§22. This position is there supposed to be taken on the major third ♭b_c_d; and will best explain the manner in which it may be compared with and derived from the minor position at fig: 16. The latter position may be supposed to be on the minor third bc_d taken 1 2_4: which being enlarged to the major third ♭b_c_d, the second and fourth fingers will remain the same distance in both positions, while the first finger is to be stretched in an oblique direction backwards, and will only enable the performer whose fingers are of a moderate length, to stop the string with the edge of the first finger that is next the thumb, as at the figure.

§23. In the following scale of D. the d_e_♯f, of the fourth string, and a_b_♯c of the third, require the major position, on both these strings, and the minor position as before on the first and second string. and it will be right to sound the open string d, in order to ascertain the place of the first finger at the beginning of the scale.

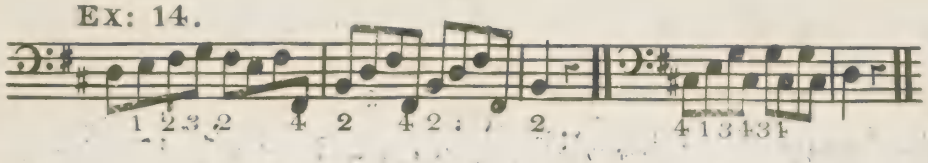
Ex: 13. Extended scale of D.



§24. At b..... there is a further extension of the scale, which being a repetition of d_e_♯f on the fourth string, must be taken with nearly the same extension of fingers in a major position, the fourth finger being extended very near to the rim of the instrument; this part of the finger board is called the whole shift, which will be afterwards more fully explained with a variety of examples. At x, is shown how ♯c is taken on the fourth string, by shifting the hand backwards, and taking d with the second finger, which will place the first finger on ♯c. This part of the finger board is generally called the back shift, it is occasionally used on all the strings and the position is always minor 1 2_4, as ♯c d_e at y.

§25. In the second octave of the above, there is marked over both tetrachords 1_23, and below them the former fingering 1_34 of Ex: 1. both these methods are adopted in practice, and it is not easy to say how soon the Learner should begin to practice the former, as it depends on the facility with which he can stretch his fingers, and circumstances may even make it unadvisable for him to do it at any time, since it cannot be denied that very good performers never use this mode of fingering in the lower part of the instrument. It gives however many advantages in point of accuracy in crossing the strings, where octaves fourths and false fifths occur; tho' it be granted that on one string 1_34, will take a minor third, in any part of the instrument not beyond the rim, as well as 1_23.

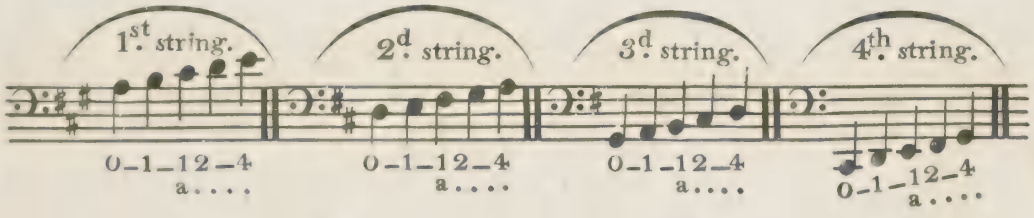
Ex: 14.



Of the HALF SHIFT.

§26. When five following notes ascending, beginning with an open string, are to be taken on one string, the hand must quit its position after the first two notes, and advance one tone on the finger board, the three remaining notes will then be on the half shift. Thus a_b_#c d_e of the first string, is taken a_b in the ordinary position, and #c d_e in a second minor position on the half shift: d_e_#f g_a will have #f g_a on the same shift on the second string, and so of the third and fourth strings.

Ex: 15.

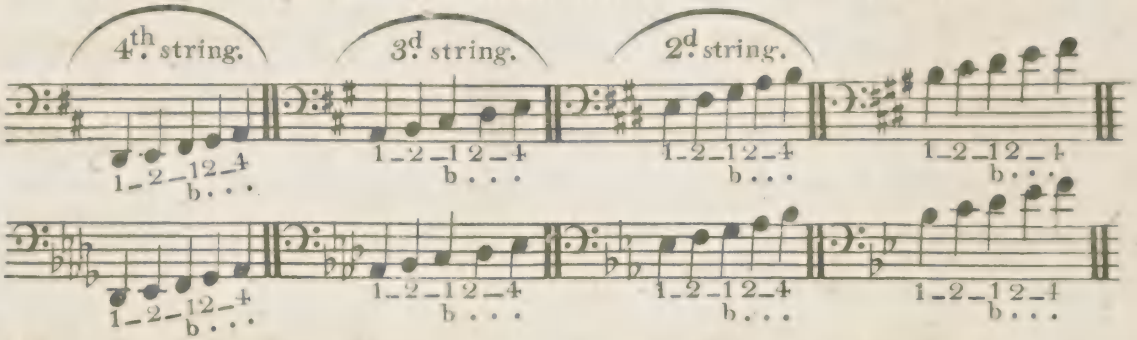


Of the WHOLE SHIFT.

§27. When five notes gradually ascending and beginning, with the first finger, are to be taken on one string, the hand must quit its position after the first two notes, and advance one tone on the finger board, the three remaining notes will be on the whole shift. Thus d_e_#f g_a, the first five notes of Ex: 13. taken on the fourth string, will be d_e in the ordinary position, and #f g_a, in a second minor, on the whole shift. And as the first five notes of the scale of D, are thus taken on the fourth string; so will the first five notes of the key of A, be taken in the same manner on the third string; and of the keys of E, and B, on the second and first strings, as in the following example. And

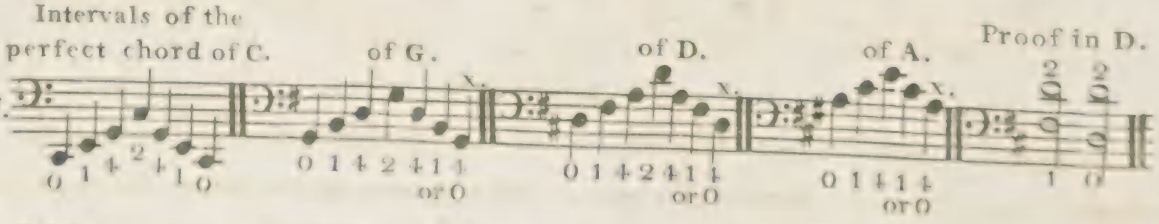
in order to shew that all keys consist of the same intervals or distances, differing only in the key or note which begins their scales, there is subjoined the four keys of D♭, A♭, E♭, and B♭, which must be taken in the same manner, the only real mechanical difference consisting in the latter keys being a semitone flatter or nearer the nut, in all their intervals, than the former, yet the place of the last three notes, is called the whole shift in both.

Ex: 16.



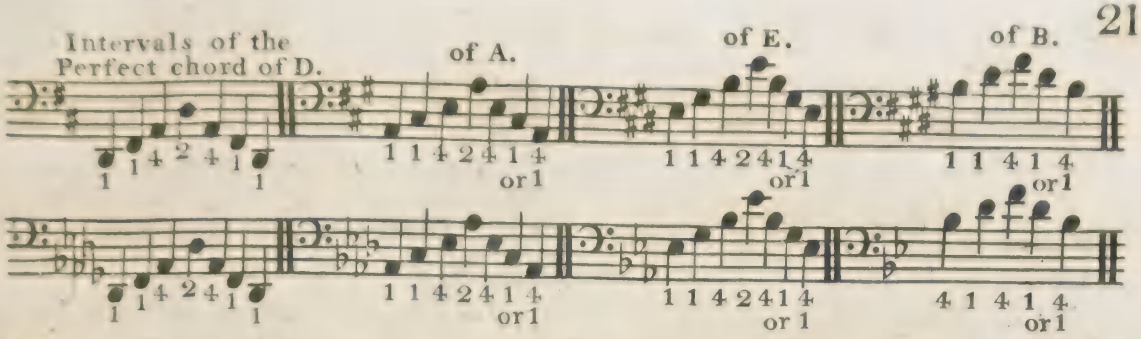
§28. The half and whole shifts form such an essential part of the finger board, that very little can be done, without the ready use of them; they ought to be well characterized in themselves, and distinguished from each other, before the Learner proceed to the practice of them in a variety of Airs which will be immediately given. And First as to the half shift let the four open strings be the fundamental sound, which is to establish the tune or pitch of two others, its third, and fifth, to be taken on the same string in the half shift, with the first and fourth fingers: these being the most natural succession of sounds, and generally taken by the voice to ascertain and fix any given key; to these three sounds may be added a fourth which will be the octave of the first or fundamental sound; and will be taken with the second finger on the next string, as $\frac{0}{c}\ \frac{1}{e}\ \frac{4}{g}\ \frac{2}{c}$. If the intervals are taken in tune the octave will sound a sixth with the third of the key, that is the second finger and the first, and the octave ought also to be well in tune with the fundamental or open string, as in the following proof.

Ex: 17.



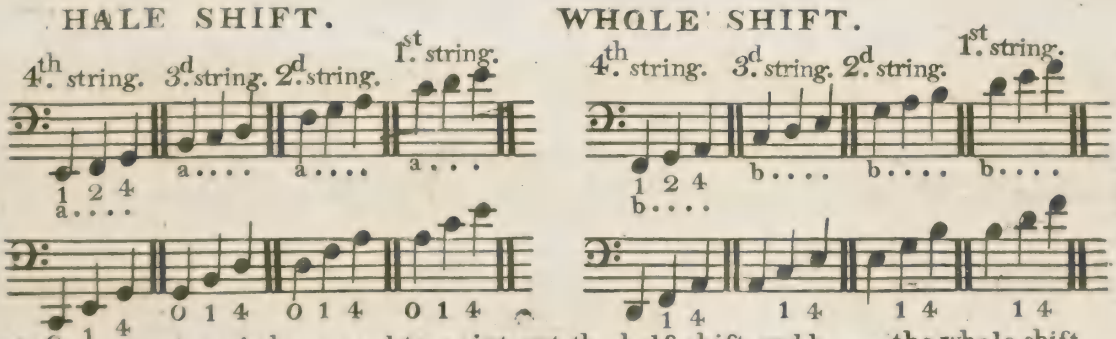
§29. At x, x, x, instead of the open string the fourth finger on the string below may be used: In the same manner the fundamental sound being taken with the first finger, its third and fifth will be on the same string in the whole shift, and its octave will be taken with the second finger on the next string, and this equally in flats as in sharps, as before in Ex: 16.

Ex: 18.



§30. The appearance of two or more notes, if properly considered, will exhibit certain characteristic marks, by which it may be easily seen whether they are to be taken on the half or whole shift. For instance, if we inspect the above examples we shall see that notes cut by the lines characterise the former, and notes in the spaces or above the lines, characterise the latter: in other words, the half shift taken separately on each string, will have the first and fourth finger on notes cut by the lines, and the second finger on that in the intermediate space; On the contrary the whole shift has the first and fourth finger on notes in the spaces and the second finger on one cut by the intermdiate line. Notes placed from line to line, or from space to space equally express the interval of a third, whether the third lies on the same string (1–4) or ascends or descends to the next string: the next two thirds in succession will be fifths to the first two and consequently taken with the same fingers (1–4) see §9. and Ex: 2. This will appear more evidently by recapitulating the above examples, and comparing their characters together.

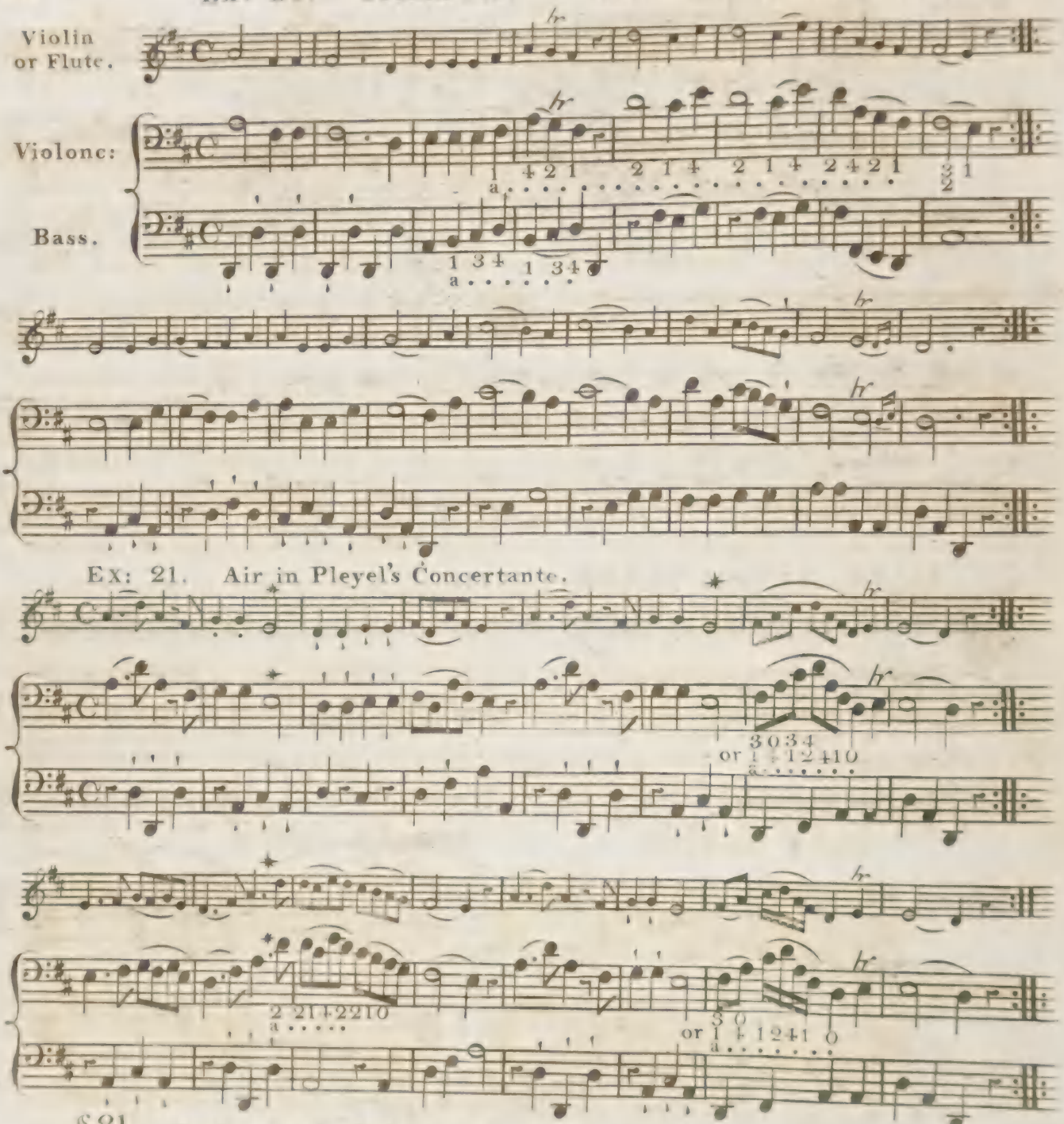
Ex: 19.



a.... is here used to point out the half shift, and b.... the whole shift.

A little use will render these characteristicts familiar even in cases where a multiplicity of notes make their limits less easily defined; in the mean time examine N° 80 Appendix, at the letters a and b, and N° 69 append: at g, and h, for the half shift, and i, k l m, for the whole shift, and in general in the following examples at a.... for the former and b.... for the latter. With these observations the Learner may proceed to the practice first of the half shift, and afterwards to that of the whole shift, in the following examples.

Ex: 20. French Air. see 3 Variat.ns Appendix N.o 99.



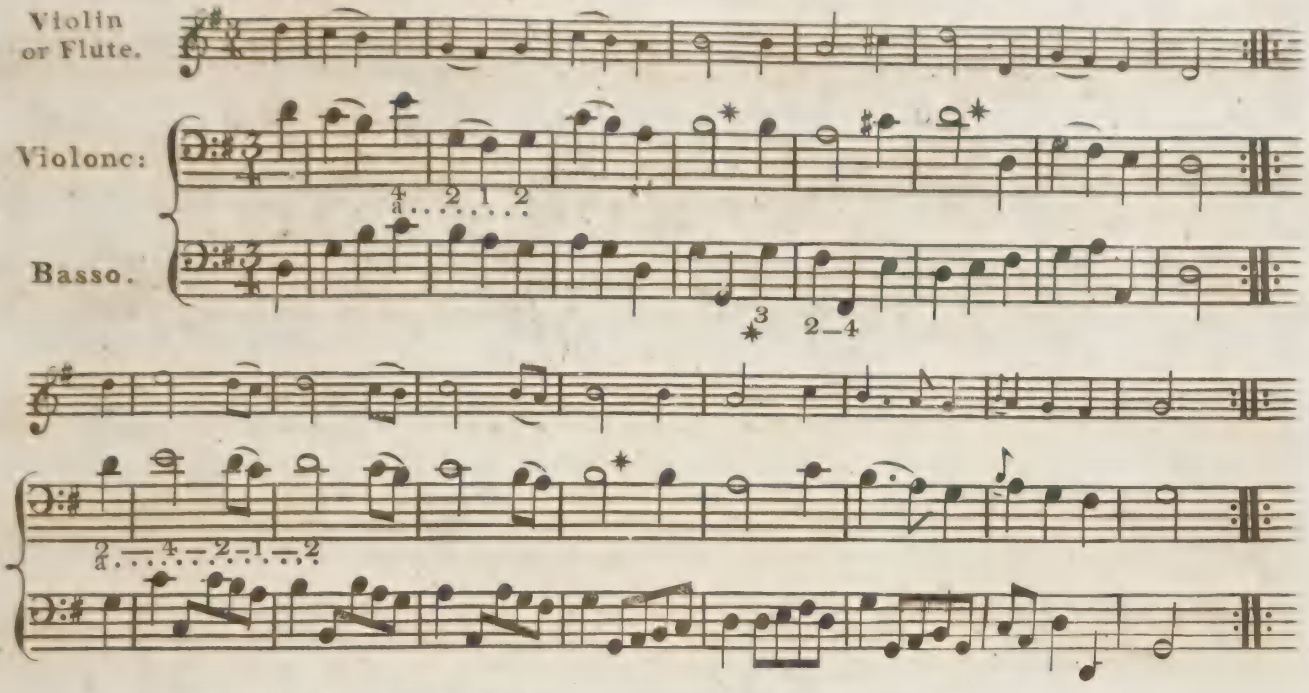
§31. In the examples hitherto given of the half shift, the position has been a second minor 1–4, and this will remain a standing rule in the key of D, on the first and second strings: the intervals being ♯c d–e, on the former, and ♯f g–a on the latter. but in keys where the interval enlarges to a major third, as ♯c–d–e, or to a first minor as ♯c–♯d e the fingering will become 1–2–4 or 1–3 4. which are all the varieties that will generally occur in the intervals of three contiguous thirds, as the diminished third ♯c d ♭e, (taken 1 2 3, or 2 3 4 as the fingers happen to have been previously placed) but very seldom occurs, and consists in fact, but of the interval of a whole tone, as ♯c–♯d. In the key of G. the half shift will be c–d–e or a major position on the first, but still ♯f g–a, or a second minor as before on the second string.

Ex: 22. Hymn.

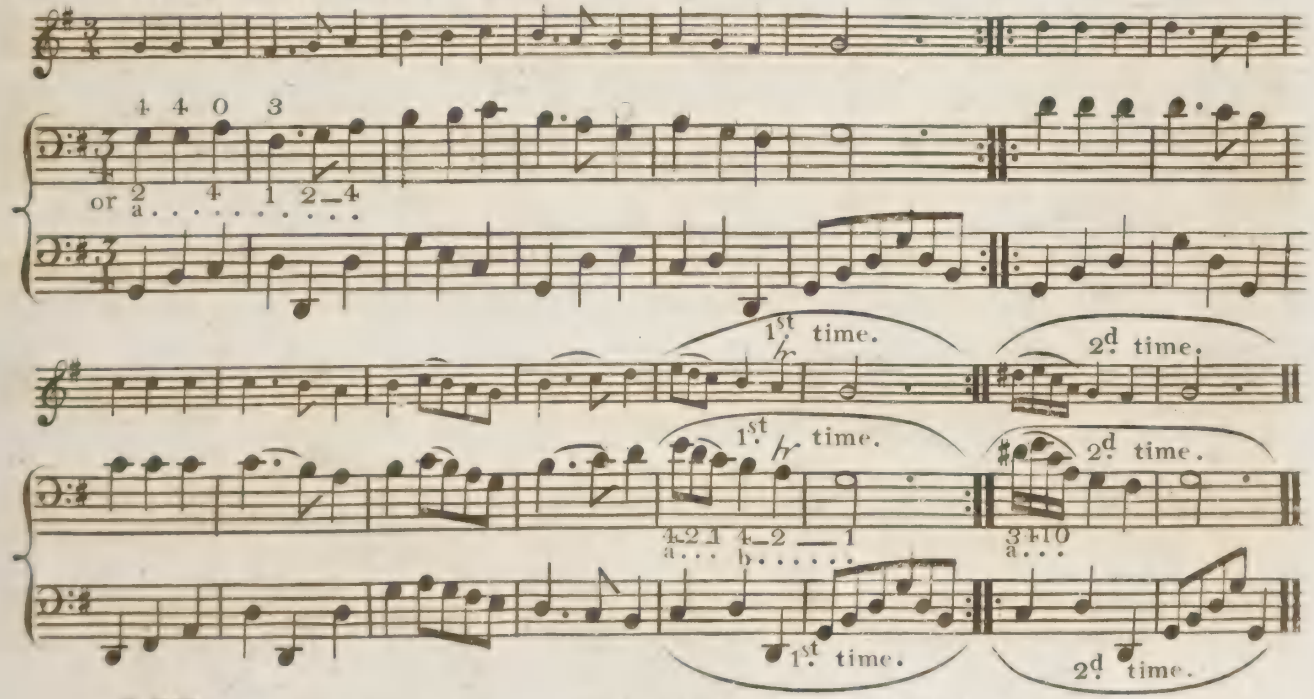
Violin or Flute.

Violonc:

Basso.



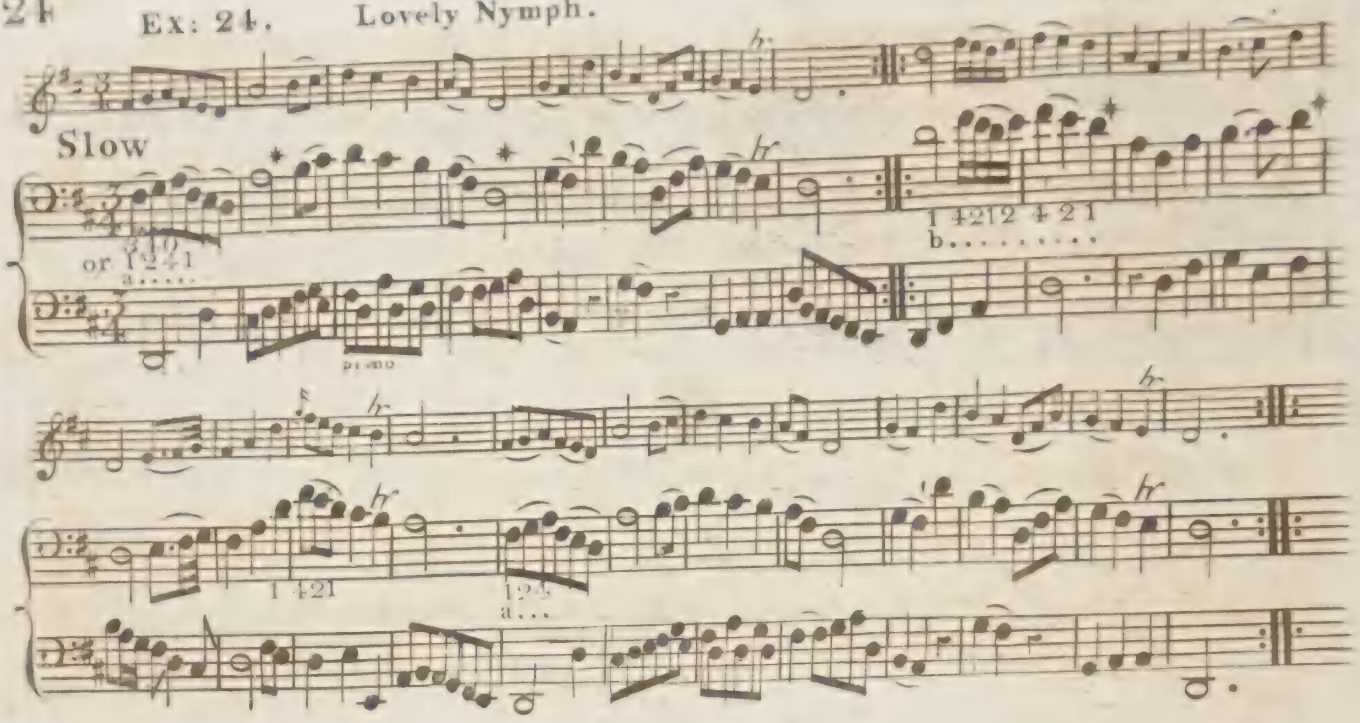
Ex: 23. God save the King.



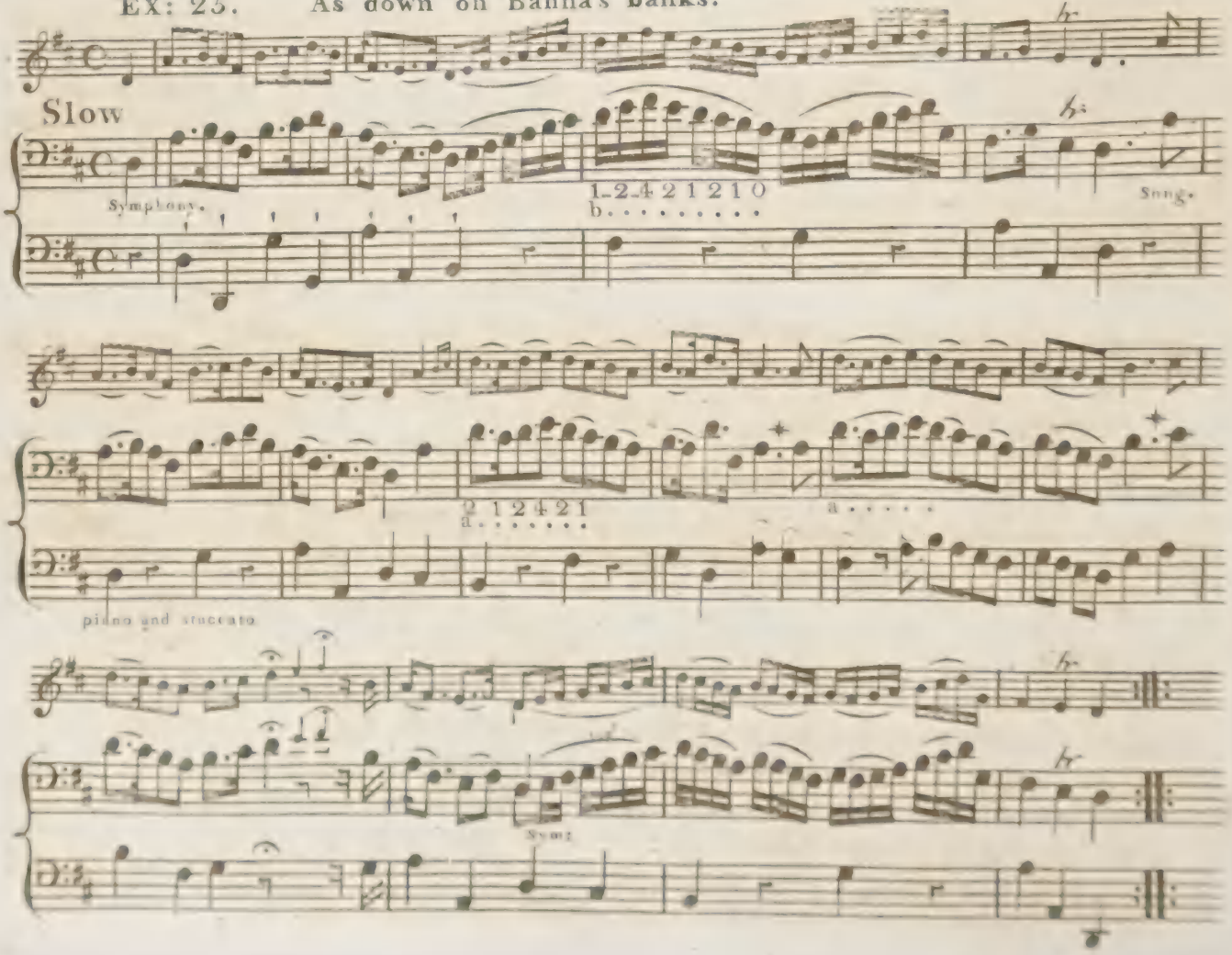
§32. In the following examples of the whole shift, it forms a major position, as in the extended scale of D. Ex.13. and it ought to be observed that this shift is always major, on the first and second strings, both on the keys of D and G. as above at b. . . . , d—e—#f, and g—a—b being both major thirds. In other keys it is a minor, as will afterwards appear in the examples to be given on different keys, and in the following the half shift will also frequently occur.

✦ See the advantage of this fingering §25 and Ex: 14.

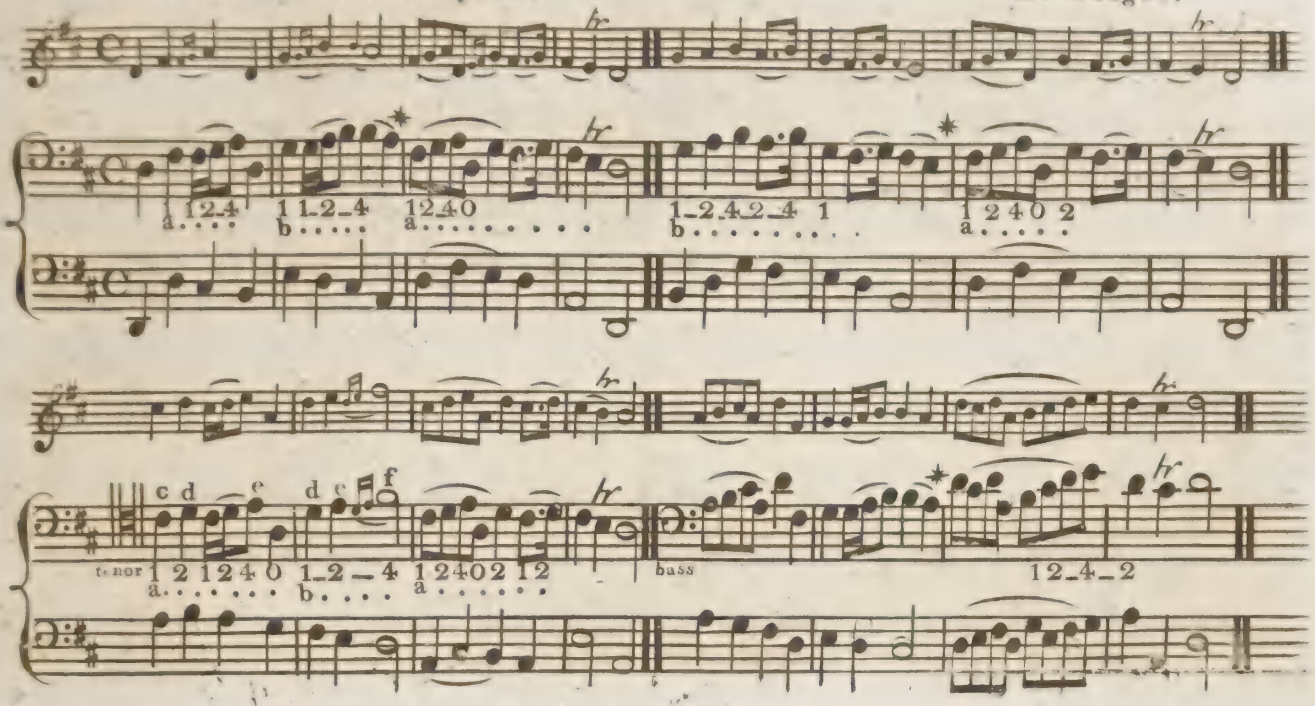
Ex: 24. Lovely Nymph.



Ex: 25. As down on Banna's banks.



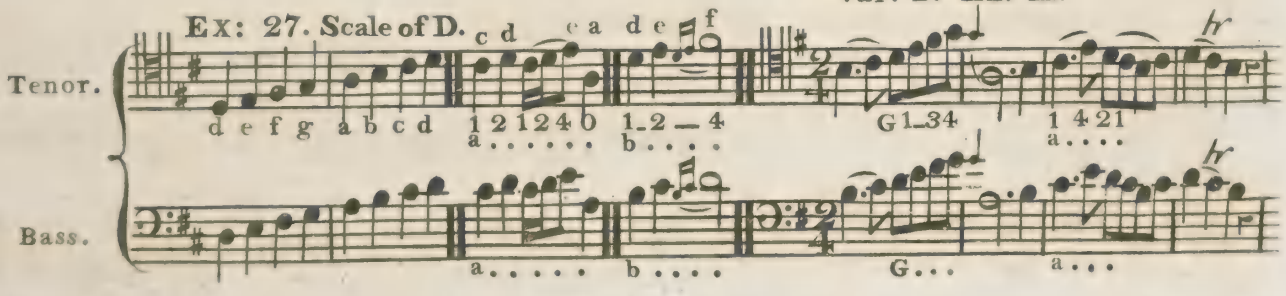
Ex: 26. Easter Hymn. Dr. Worgan.



§33. The four bars of the above example in the tenor clef are to be played on the half and whole shifts, like the similar four bars which begin the example, but on the first string instead of the second, the characteristic marks of lines and spaces applying equally to the tenor as to the bass clef, the former being in all positions of the hand a fifth that is one string higher than the latter, as will appear from the following comparison of the same notes written in both clefs.

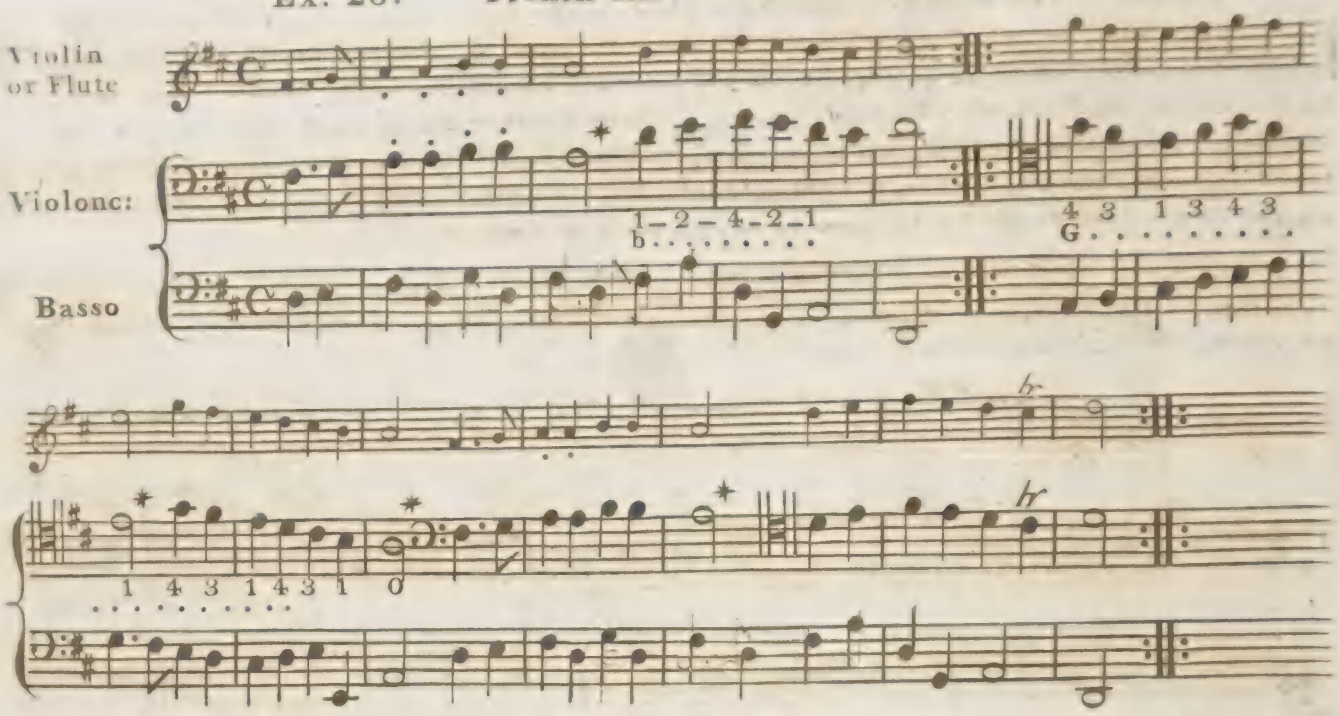
Var: 2. Ex: 12.

Ex: 27. Scale of D.

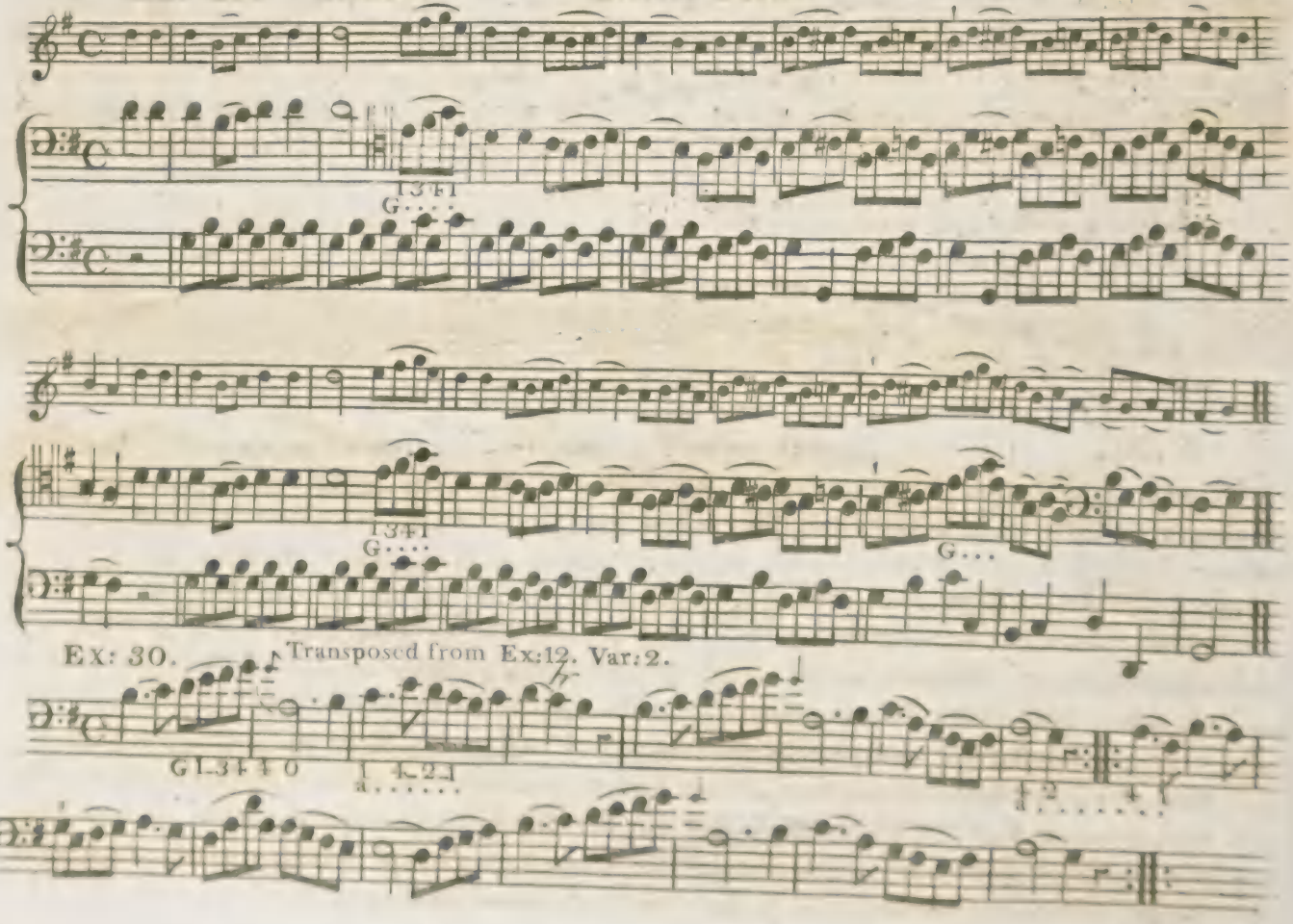


§34. The next shift which it will be necessary to know and practice, is that of G. which is the semitone next above #f on the whole shift: it has already been explained above §19. and Ex: 8. The two following examples in which it is a first minor position, will show that its situation on the finger board, by the hands resting on the side of the instrument, is better defined than either of the preceding shifts. And it may be also observed that this position when it is a tone and semitone or first minor, may be also fingered 1_23 (§25) but in that case the hand must be placed a little more to the left, so that the third finger may go from the rim in the direction of the dotted lines, to g, fig: 16, but the other position is by much the easiest and most certain at first.

EX: 28. French Air.



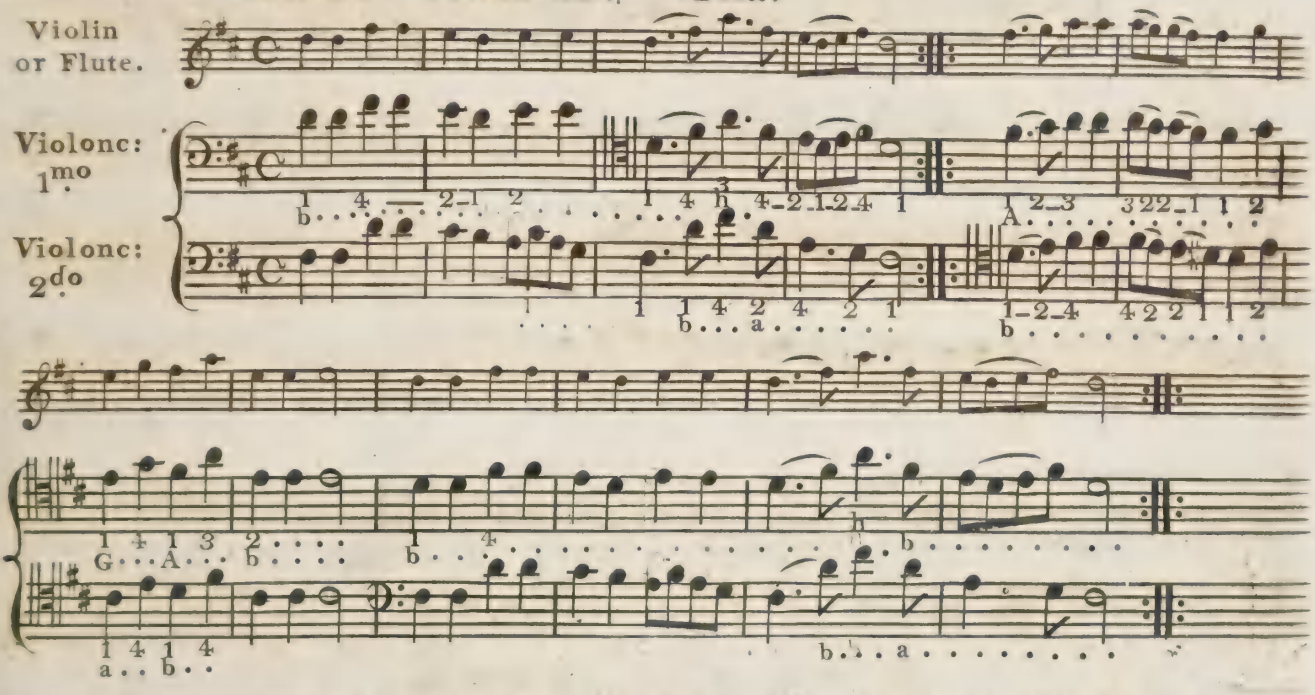
EX: 29. Rondo. Breval's Duets.



EX: 30. Transposed from Ex:12. Var:2.

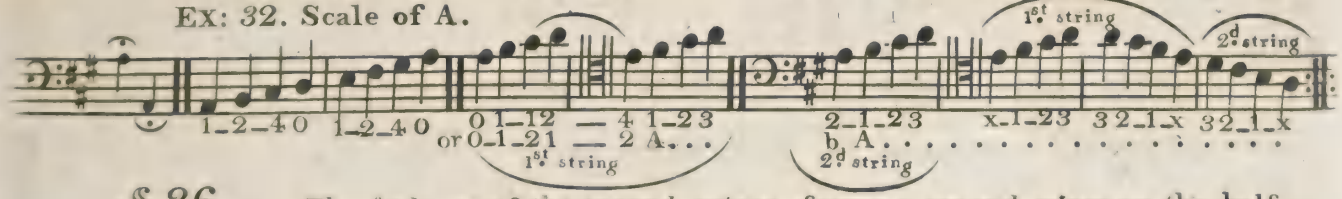
§35. The next position of the hand on the finger board is that of placing the third finger on a, by moving the hand still more to the left, on the side of the instrument: so that the finger being at x, fig: 16 may pass in the direction of the dotted lines on a, In the key of D, it forms with the #f and g, a second minor 12–3 as at A..... in the following example, but at h, being unconnected in a position with other notes, it may be taken as an harmonic, that is, the finger laid lightly on the string without pressing it down on the finger board, whilst the bow is drawn with its usual pressure.

EX: 31. French Air. Duett.



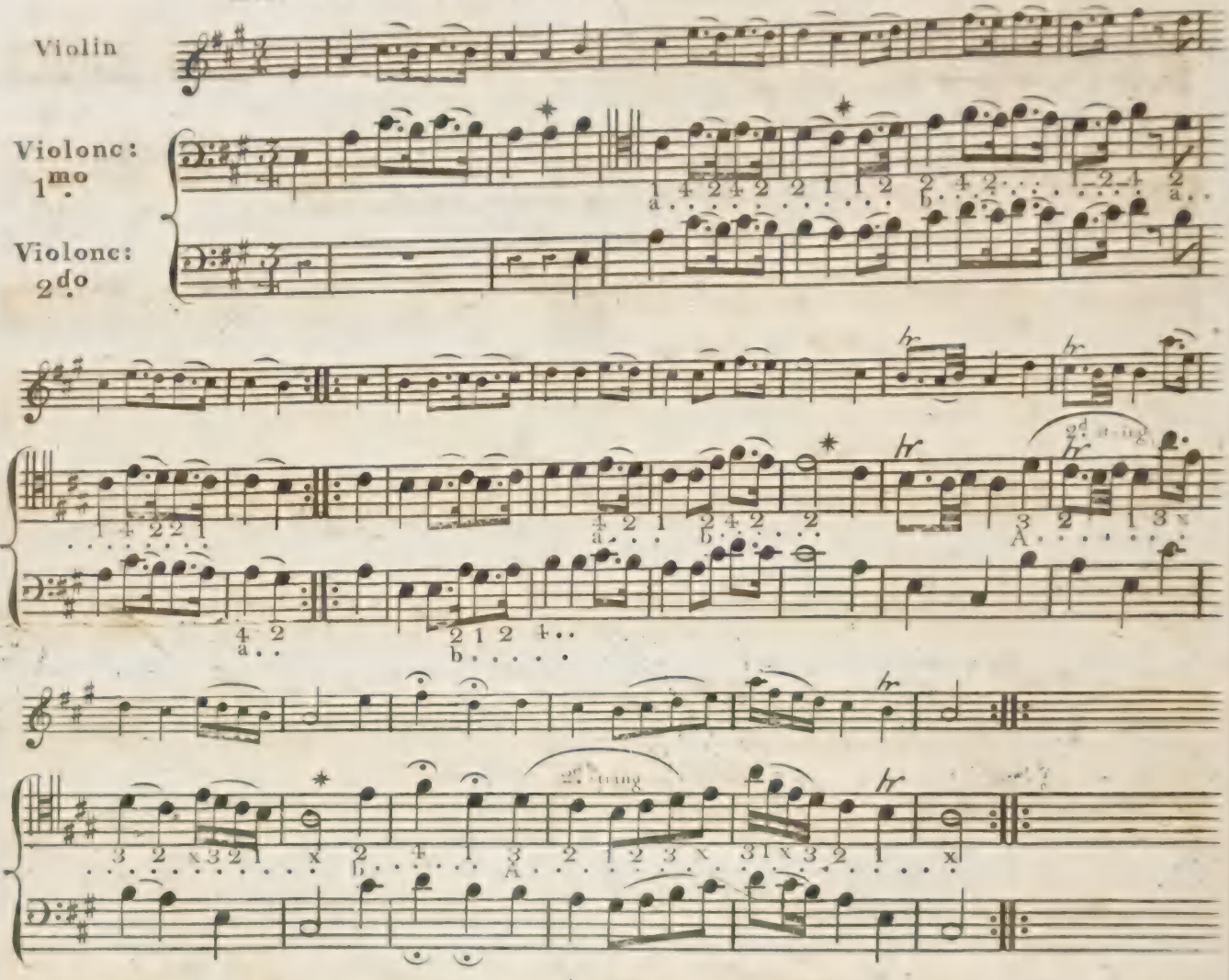
In the key of A, the position is a first minor as will appear in the following

EX: 32. Scale of A.



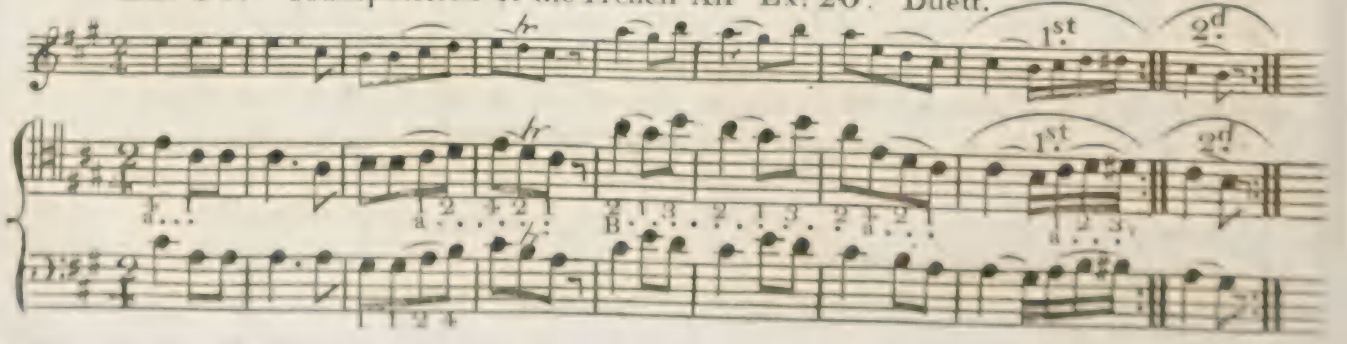
§36. The #cd–e, of the second octave, forms a second minor on the half shift, if they are to be slurr'd as marked, but in any other case, the inconvenience of taking two following notes with the same finger, is avoided by the other and better mode of not shifting the hand till after c– then d–e on the whole shift. The last four bars contain the second octave on a thumb position, that is the thumb on the key, and its fifth note e, at x. x. which may be either placed originally on these notes or after the ascending scale has been made on the first string in either of the two modes just mentioned; the manner of ascending on the second string, is afterwards shown at b A... where the second finger on a, whole shift, is followed by b–#cd, on the position A, then the thumb is to be placed on e on the first string, followed by the 1–23 fingers on #f–#g a, opposite to b–#cd on the second string. The last two bars contain the descend ing scale without quitting the position. The following example will show the advantage of taking the thumb position, and b–#cd on the second string.

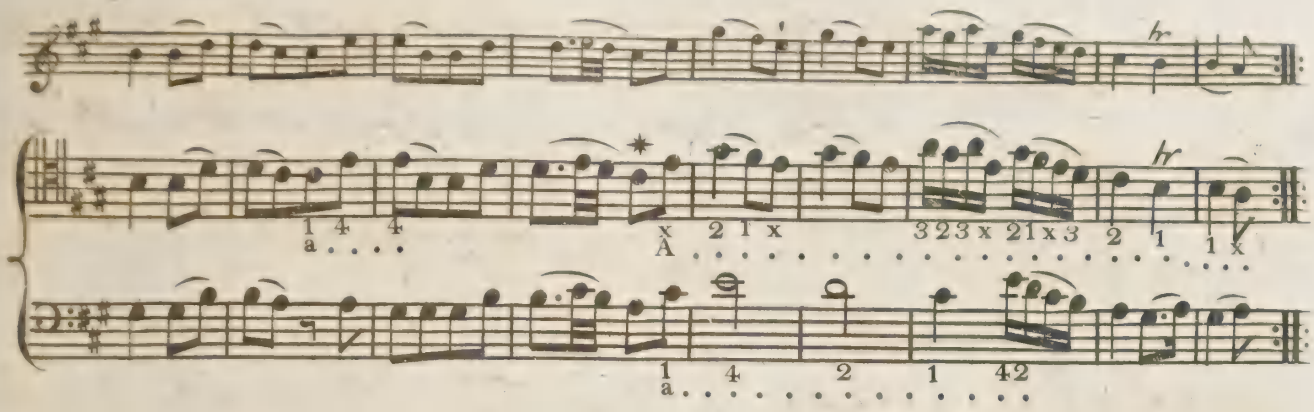
Ex: 33. How sweet in the Woodlands. Duett. D^r. Harrington.



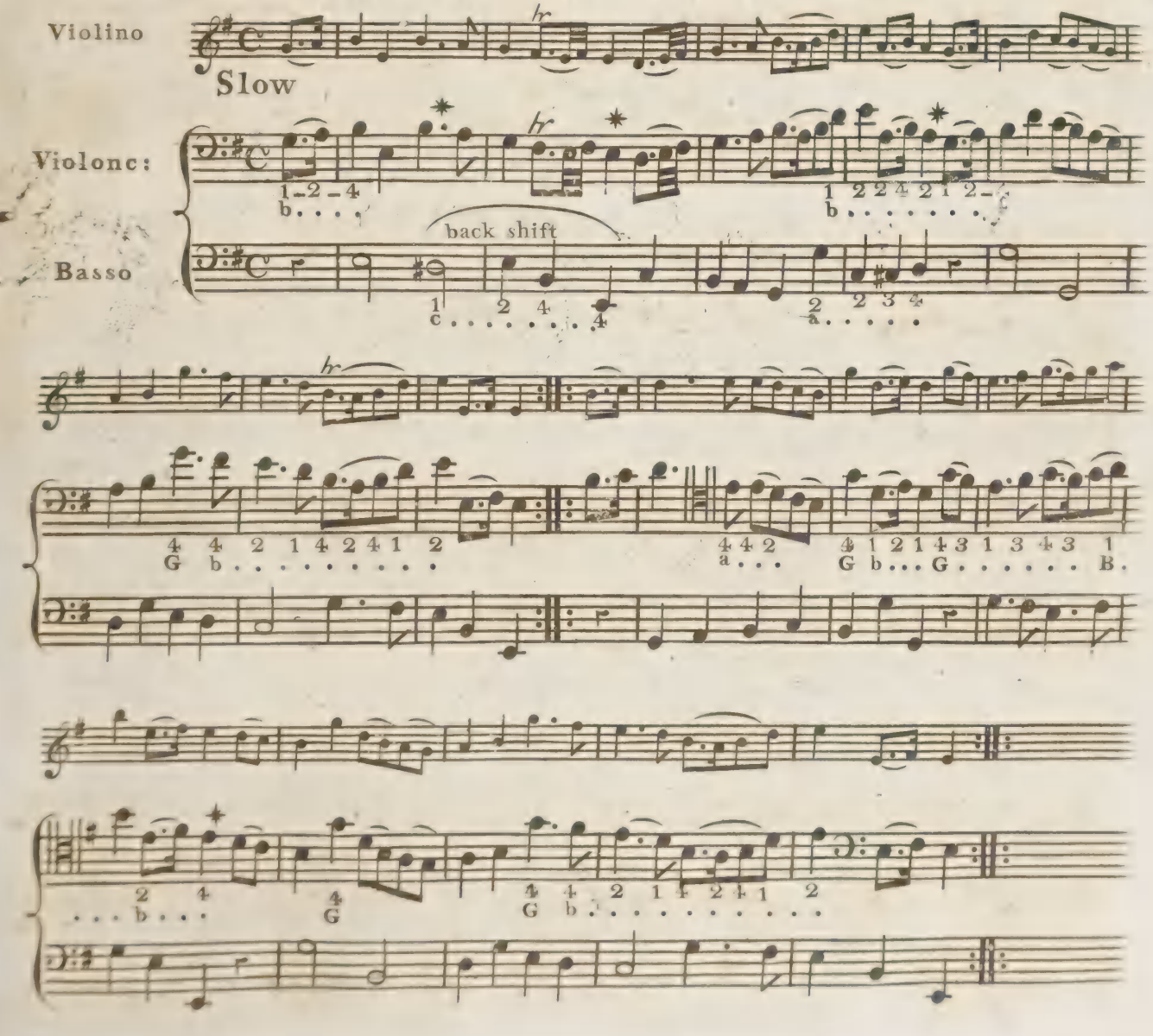
§ 37. The next position of the hand in ascending the finger board is that of b♭, a semitone higher than the a of the above example, but as that will be more naturally practised with the scales of F, B♭, and E♭ which will next follow, two examples will be first given of b♮ as more immediately connected with the foregoing keys in one two and three sharps. To reach this note with the third finger the hand must be brought to Y. fig: 16 which will draw the thumb to the very edge of the finger board. In the first example the position will be second minor ♯g a – b, and in the second it will be a major g – a – b.

Ex: 34. Transposition of the French Air Ex: 20. Duett.



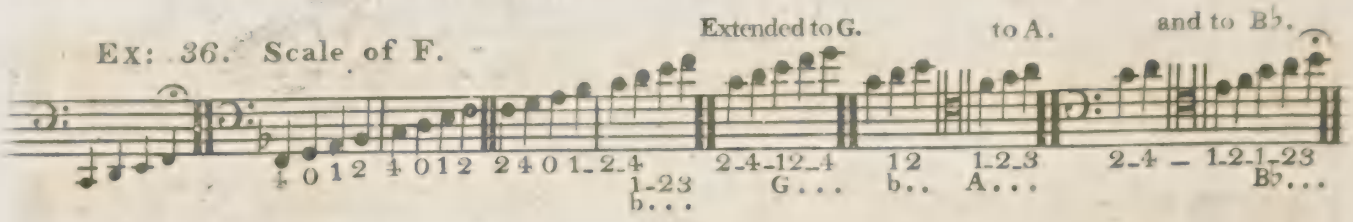


Ex: *35.* **Scotch Air.** **in Rosina.**

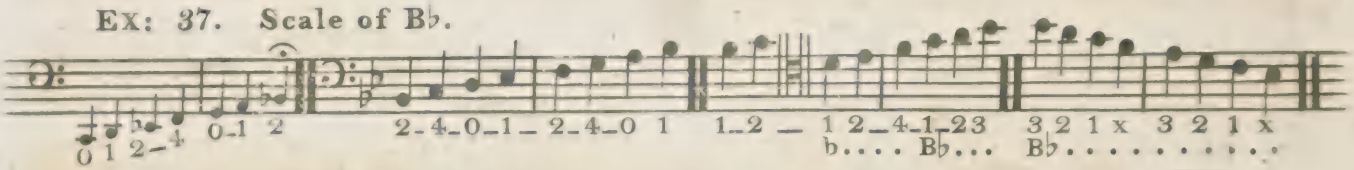


§38. It will now be proper to introduce the most usual keys which have flats at the clef, in the order given at Ex: 6. And beginning with that of F, it will appear by §15, that the seventh of the preceding scale of C, Ex: 6 and 4 being flattened a semitone, will become in the key of F, b♭, and constitute the fourth of that key, and in like manner arise the e♭ and a♭ of the keys of B♭ and E♭.

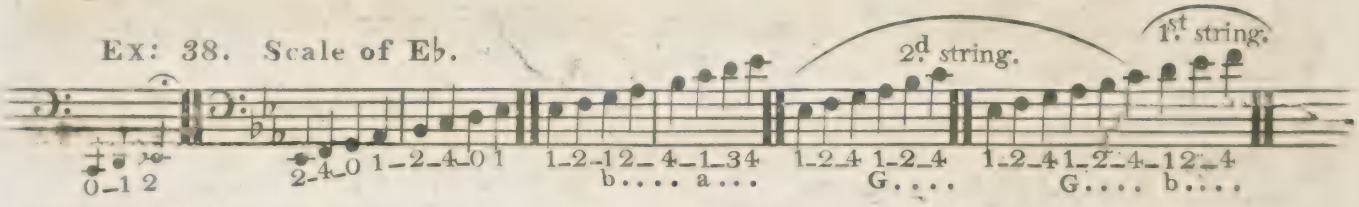
Ex: 36. Scale of F.



Ex: 37. Scale of B♭.



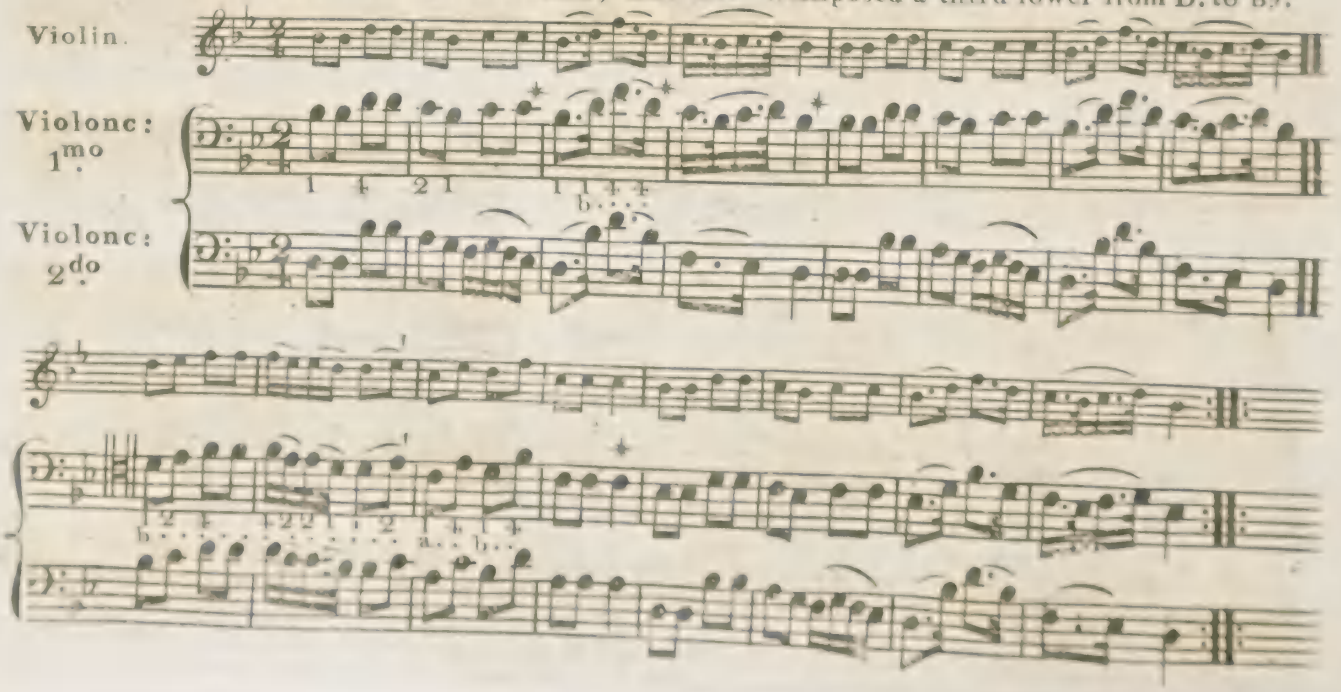
Ex: 38. Scale of E♭.



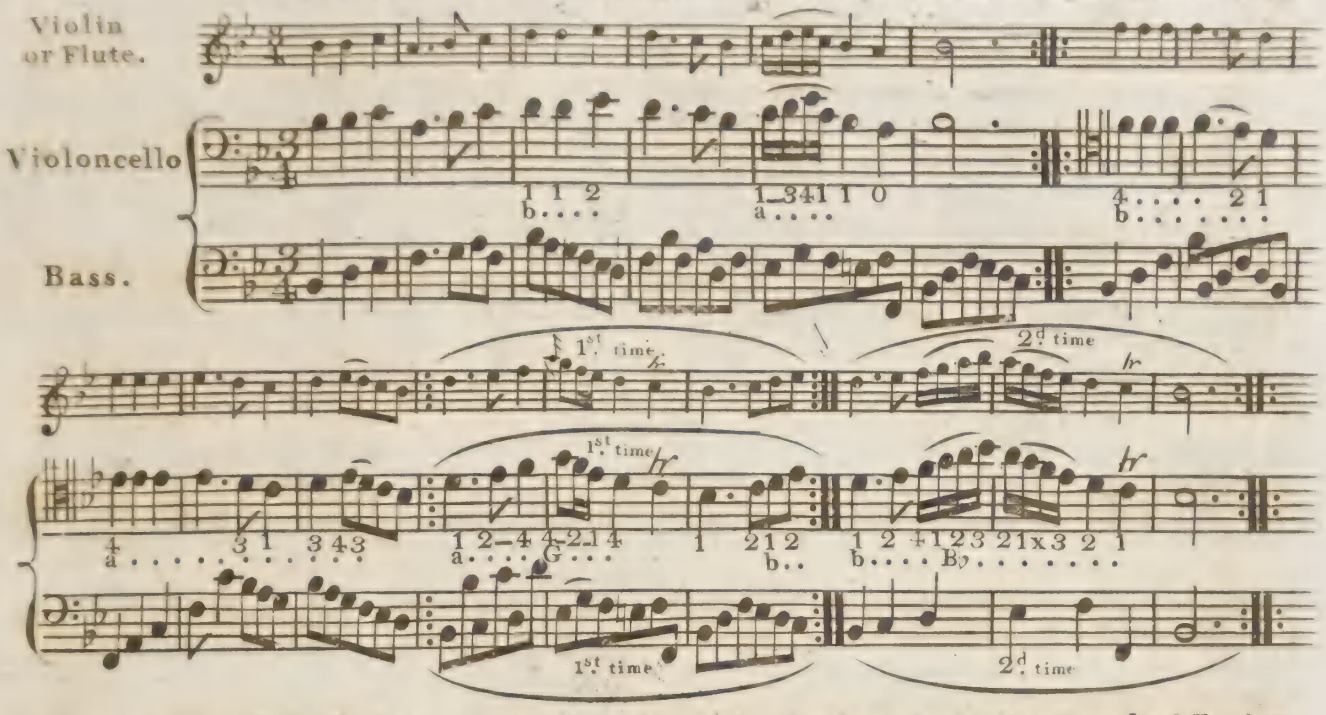
§39. It is to be remarked of the first of the above three scales that of F, that on the second and third strings the position is second minor, ef—g, and ab—c, and on the first string it is a major, b♭—c—d. Of the scale or key of B♭ that on the third, and fourth strings the position is second minor, ab♭—c, and de♭—f, and on the first and second strings, it is major, b♭—c—d, and e♭—f—g, And lastly that in the scale or key of E♭, the fourth string only is second minor, and the other three strings have a major position, b♭—c—d, e♭—f—g, and a♭—b—c.

Two examples follow in B♭, as the easiest, and nearest connected with the other two keys.

Ex: 39. The French Air, Ex: 31. transposed a third lower from D. to B♭.



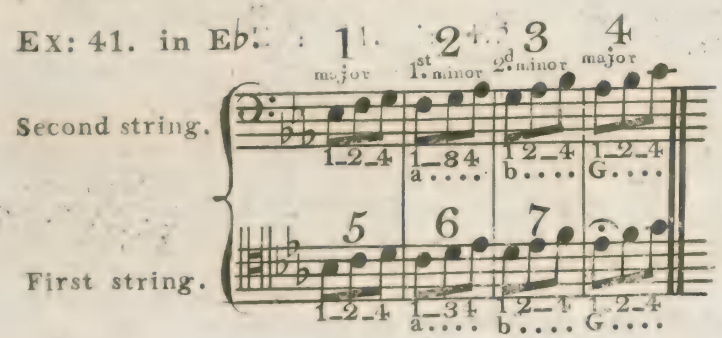
Ex: 40. God save the King. transposed a third higher from G to B♭.



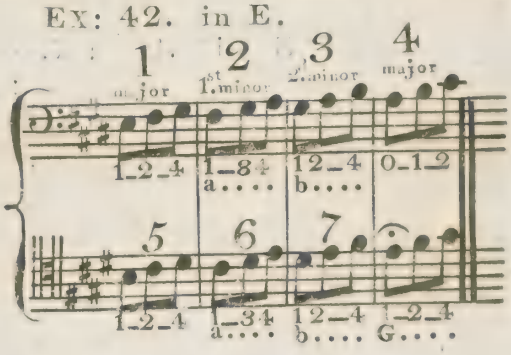
The positions in the above examples will receive further elucidation from the following Analysis, and subsequent examples.

§ 40. The key of E♭ in its second octave, precludes the use of the open first string, which is a semitone sharper than the a♭ of that scale, and this a♭, as it may be combined with the preceding or following notes, as f–g a♭, g a♭–b♭, a♭–b♭–c, render three shifts necessary on the second string viz: two successive minor, and one major position; This leads to the analysis of a scale into all the positions by thirds that it can produce, which will give a general rule for fingering in all keys, distinguishing what positions will be major or minor.

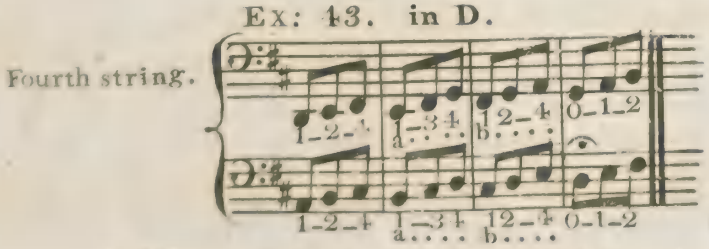
Ex: 41. in E♭.



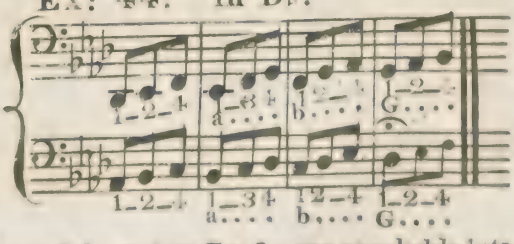
Ex: 42. in E.



Ex: 43. in D.



Ex: 44. in D♭.



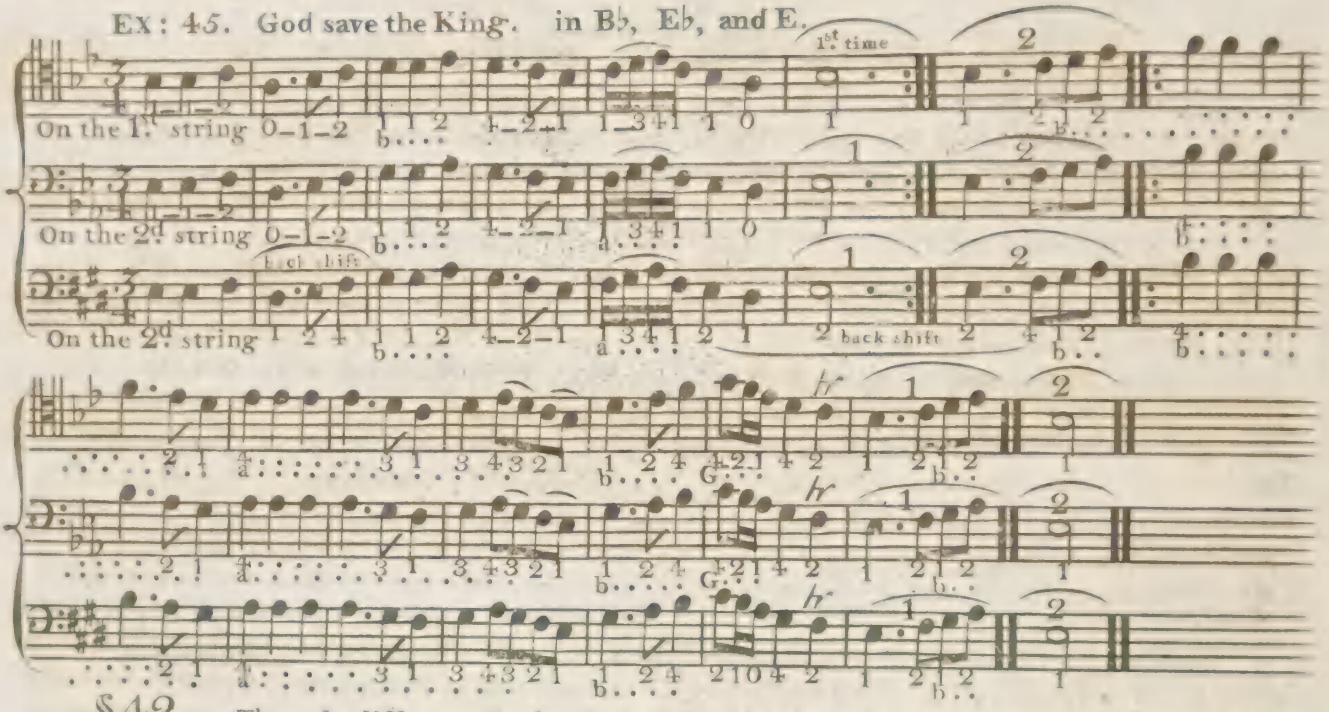
§ 41. And in like manner the twelve major keys of the system Ex: 6. are resolvable into seven positions of thirds, in the above and following order, 1 major, 2 first minor, 3 second minor, 4 major, 5 major, 6 first minor, 7 second minor,

and it is a remarkable property of the octave that its 1, 2, and 3d positions or thirds, have exactly opposite to each on the next string similar thirds, for its 5, 6, and 7 positions, the positions of the next octave

are of the same nature and properties with those of the first, as in N.o 67 of the Appendix, where two octaves of E♭ are given, and in N.o 68 two octaves in the key of C♯ show that notwithstanding its seven sharps, it may be taken with as great facility by means of this analysis as any other key.

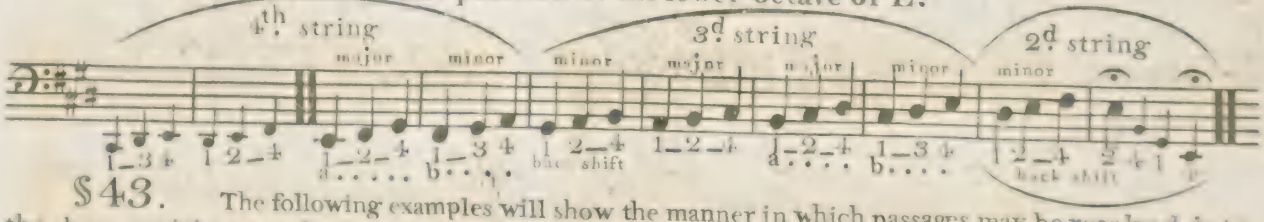
The following example of three different keys compared with each other will further illustrate the analogy between the bass and tenor clef, and show the application of the Analysis, and its utility in practice.

Ex: 45. God save the King. in B♭, E♭, and E.



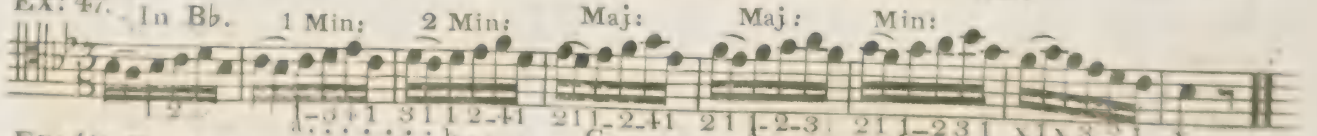
§ 42. The only difference in the fingering of the three keys is in the second and fifth bars in the key of E, in which the open string cannot be taken as in the two others where it forms the semitone wanted, and in the close or last bar but one, where the open string a, which cannot be taken in the key of E♭, makes the former in that instance easier than the latter, tho it is a much more intricate and difficult key in its first octave, as will appear from the following analysis, and N.os 74 and 83 Appendix.

Ex: 46. The position of the lower octave of E.

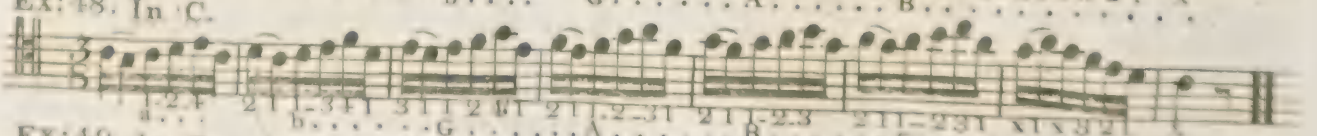


§ 43. The following examples will show the manner in which passages may be resolved into the above positions on the first string, and lead to a thumb position, and may also serve to show that different keys have similar fingering, because the intervals are similar.

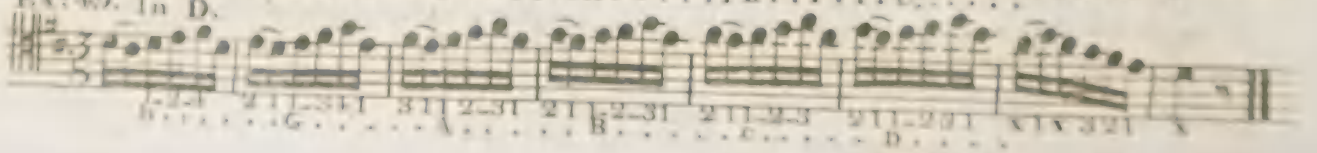
Ex: 47. In B♭. 1 Min: 2 Min: Maj: Maj: Min:



Ex: 48. In C.



Ex: 49. In D.



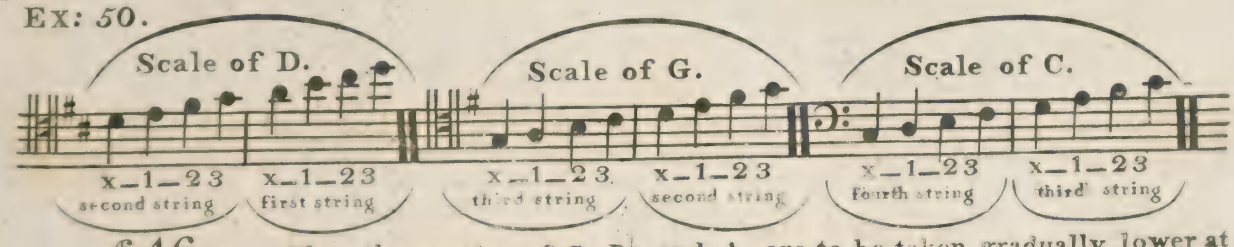
§44. The different shifts are distinguished, and tho' they may appear different in each of the three examples, there is in reality but one general idea for the three keys viz: six positions in the order marked, and it must be observed that at cc the thumb is to be placed on the finger board at its proper distance of one tone behind the first finger, and in Ex: 49 it is to move on the finger board with the other fingers, preserving its distance so as to be in its place in the beginning of the last bar but one.

Of the THUMB POSITIONS.

§45. In the three last examples and Ex: 40. this position has been introduced in the keys of D, C, and B♭. and in Ex: 32 and 33 in that of A. In the scale of the latter key the mode of its introduction has been more particularly mentioned; and as in all the foregoing instances, so in every other, the fingering ascending, must terminate in the position 1_23 when it is to form a scale of any key; for by affixing to that interval the thumb, the last or first tetrachord of any major scale in the system, §15. Ex: 6. is formed x_1_23, and on the next string will be, exactly opposite, the other tetrachord x_1_23. Thus in the two last bars of the above Ex: 46. the thumb will be on the first string at a, fig: 16 and lying across the finger board in the direction of the dotted line a..... it will be at the same time on d on the second string, and the scale of D will be formed by the above intervals viz: d_e_#fg and a_b_#cd. The thumb in this position divides the strings into two equal parts as at E fig: 19 where the two lines A B, and C D, represent strings tuned fifths to each other, as the first and second strings of a Violoncello a, and d, and shew the geometrical parts of the length of a string which form the musical intervals, but which are still more exactly ascertained by a cultivated human ear.

In the same manner the thumb, quitting the first and brought over to the second and third strings, will give on the latter, the tetrachord g_a_bc, making with the d_e_#fg of the second string, the scale of G. and the thumb moved to the third and fourth string, will then form an octave of the scale of C: The three scales being fifths to each other and the octave to those in Ex: 1, as in the following

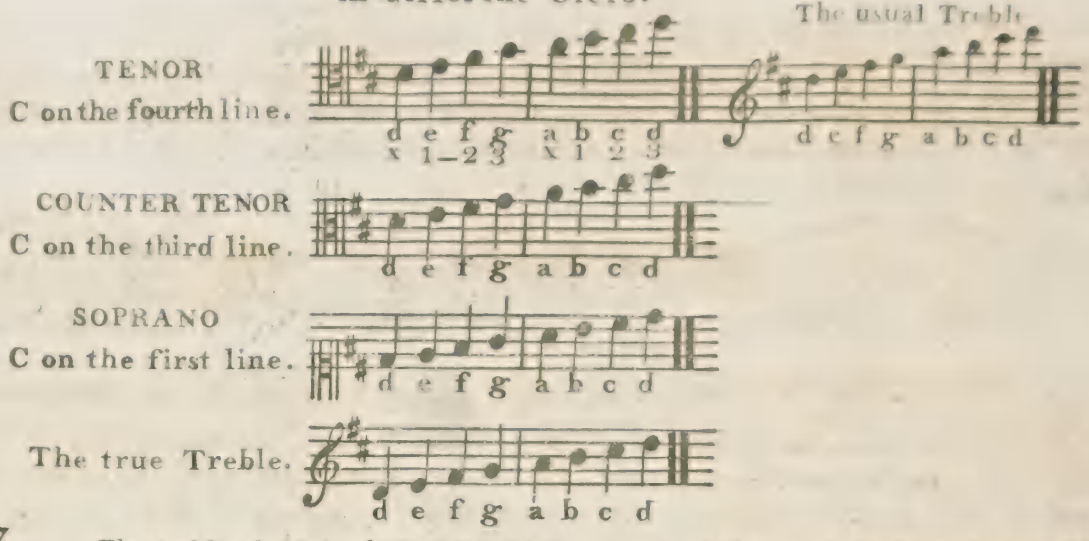
Ex: 50.



§46. The other scales of C, B♭, and A, are to be taken gradually lower at g, f♮ and e fig: 16. And it may be useful to the Learner in the first practice of taking these positions, to observe the relative position that his hand makes with the rim of the instrument; for instance, in the key of D, he will see behind his thumb a considerable Section of it betwixt his thumb and the rim; in C he will see that this section is reduced to little more than an inch, in B♭ it will appear to his eye that he is nearly on a line with the rim, or very little within it, and at A, his thumb will be very considerably within it. A little practice renders these positions more certain, and easier to be taken than is generally imagined; and use will soon render the inspection of a passage a sufficient indication of the position or octave into which it is resolvable. There is however some embarassment to the Learner from the practice of different Composers in writing the same octave or passage in different clefs. A practice the more to be lamented, that the bass and treble clef, as in compositions for keyed instruments, are found to be fully sufficient to express any passage or series of notes in the compass of the instrument. To express for instance the above octave of D, the four following clefs are occasionally made use of.

Scale of D in different Clefs.

Ex: 51.

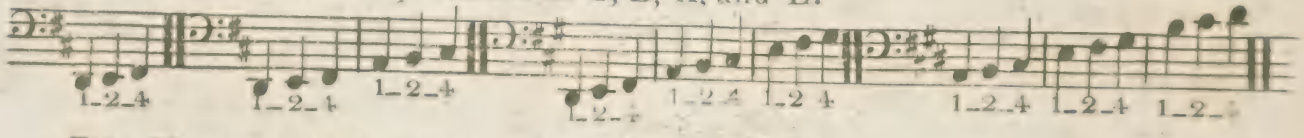


§47. The treble clef is, in the last line, in its proper pitch, as it is to be understood in an ascending series, after any of the other clefs, as in N.° 18 Appendix; but otherwise the treble clef is taken on the Violoncello an octave lower, as in the foregoing French and Scotch Airs; and a very little experience will show from the effect on the instrument, in which of these ways the treble clef must be rendered.

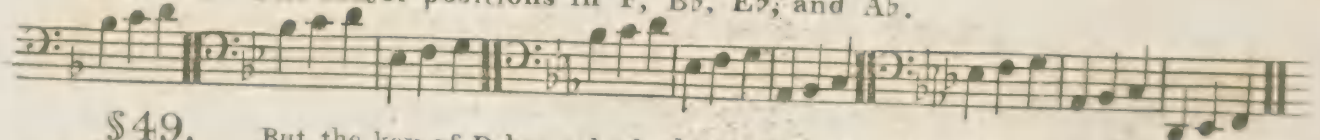
RECAPITULATION and GENERAL RULES.

§48. The key of C, Ex. 4, is the only only one in which the two first octaves can be played in the minor position of the hand alone. The key of G requires a major position on the fourth string for the ♯f; the key of D, two for the ♯f and ♯c, and the keys of A, and E require major positions on three strings. The keys of F, B♭, E♭ and A♭ require one, two, and three major positions respectively.

Ex: 52. The Major positions in G, D, A, and E.

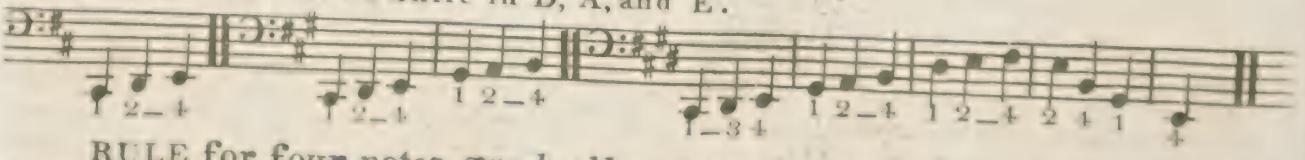


Ex: 53. The Major positions in F, B♭, E♭, and A♭.



§49. But the key of D has a back shift on the fourth string; the key of A on the 4.th and 3.d strings; the key of E on the 4.th 3.d and 2.d and they are all second minor, excepting on the 4.th string in the key of E, which is a first minor.

Ex: 54. The back Shift in D, A, and E.

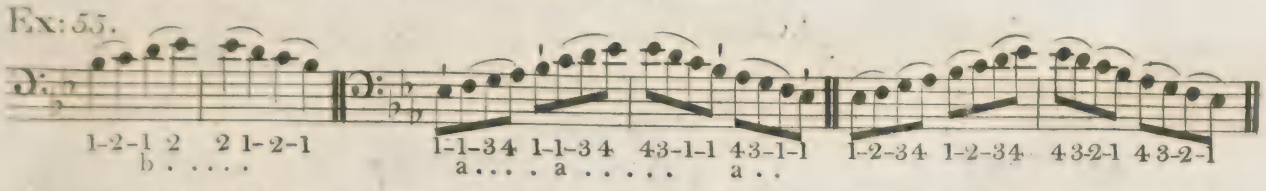


RULE for four notes, gradually ascending and descending.

§50. This is to be understood as beginning with the first finger on the key or its fifth: There are three modes in which they may be taken. First when the notes are slow, and connected two and two, the hand must shift a whole tone after the first two thus 1_2, 12. Secondly when the first three notes are to be taken together, the hand shifts a tone after the first note. Thirdly in a quicker movement than the first case, after taking the first two notes, the fingers being taken off and

extended but the thumb not moved, the third and fourth fingers will reach to the third & fourth notes. In the following example the difference consists in this, that in the first mode the two last notes are on the whole shift, in the second, the three last notes are on the half shift; and in the third, that the hand is rather extended than shifted.

Ex: 55.



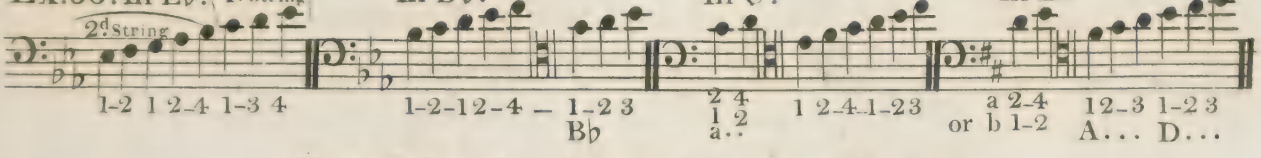
RULE for five notes in succession ascending and descending.

§51. This cannot be different from the rule already given for the whole shift § 27 and Ex: 16, viz: 1-2 in the first position and 12-4 in the second, and descending 4-21, 2-1, being the most natural shifting of the hand in the lower part of the instrument, and even in the upper part if the third finger be taken instead of the fourth. On these two positions is founded the following

RULE for eight notes or scale of one octave in all keys.

§52. To the above two positions for five notes beginning with the first of a scale, there is only to be added the first minor 1-23 or 1-34 to complete the octave, and the three positions 1-2, 12-4 and 1-23 may be taken on one string, or on two or three different strings, with this observation, that to take an immediate following note on another string in an ascending series, the hand must shift one position further back, as in the following example, and in the second octave of E♭ Ex: 38; after g ab-bb on the whole shift, the next note C is on the half shift. See also N°. 53 Appendix and references.

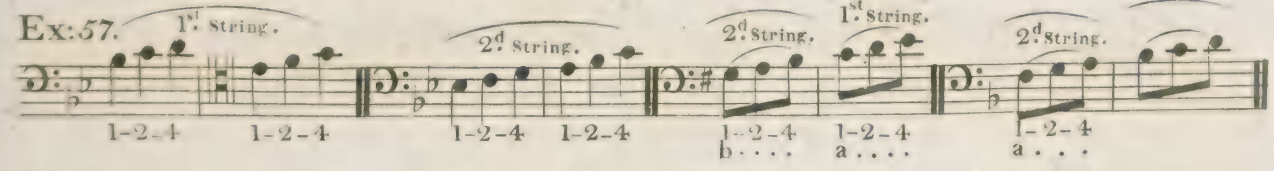
Ex: 56. in E♭. 1st String. 2d String.



RULE for the first six notes of a key.

§53. These consist of two major thirds or positions, a semitone being the space or interval betwixt the two shifts, if taken on one string.

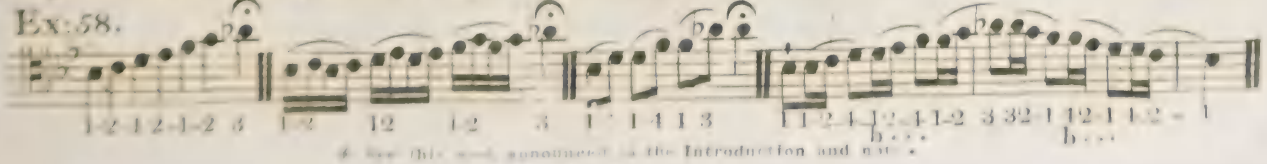
Ex: 57. 1st String. 2d String. 2d String. 1st String. 2d String.



RULE for seven notes.

§54. These are commonly taken from the fifth of the key, or only from the key when its seventh is made flat in order to modulate into a fifth below, as will be more particularly noticed in a future work, under the head of modulation*. This interval requires three positions 1-2, 12, and 1-23, unless the passage mark the thirds into which it is subdivided. viz: a major third, a second minor, and a first minor.

Ex: 58.

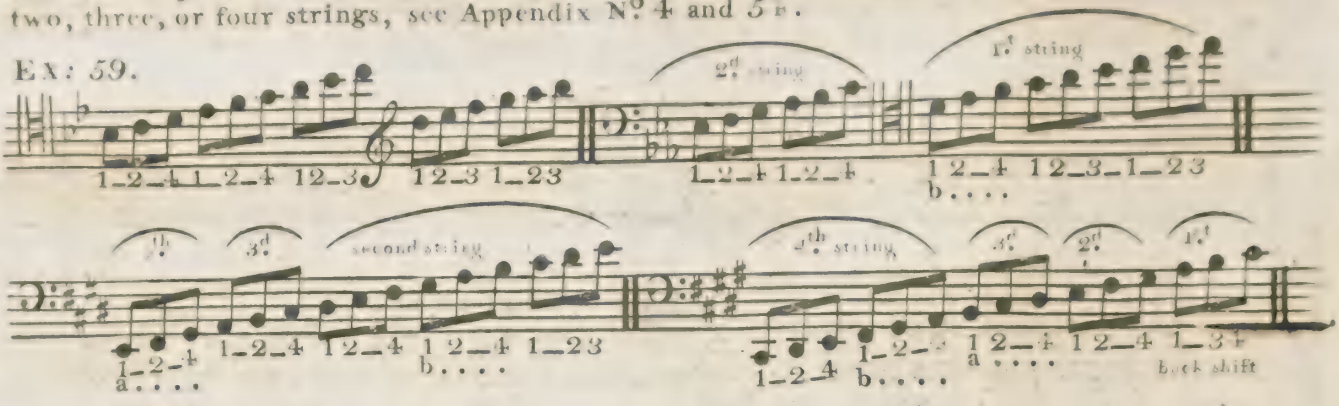


* See this word announced in the Introduction and note.

RULE for two octaves.

§55. This interval, consisting of fifteen notes, is taken in five positions, viz: two major, two second minors, and one first minor, either all on one string, or on two, three, or four strings, see Appendix N°. 4 and 5th.

EX: 59.



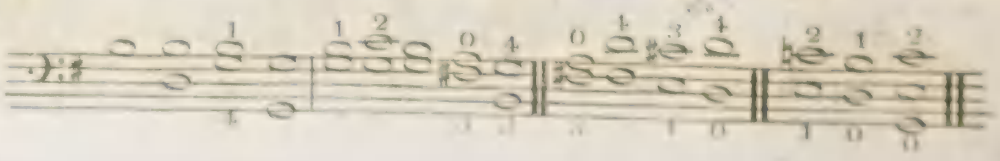
§56. However singular the retrograde movement of the hand in the last instance may appear, there is certainly, in such a case, no other regular way; and were not the open strings to lend their assistance, this mode of shifting must be always resorted to: Let the easy scale of C be compared with the above of ♯C, and the first finger be laid on the nut, the remaining fingering and four subsequent shifts will naturally follow as above (see also N°. 66 Appendix.) This will show that the four open strings are an exception, and the only one, to general rules of fingering. The rule for taking one and two octaves, beginning with an open string, is given N°. 55 and 56 Appendix.

§57. The ascending and descending scales in all the keys, major and minor, of the system are given from N°. 1 to 52 of the Appendix, each series in the order of fifths descending as at Ex: 6, explained in §13, 14 and 15. This order will always appear by the capital letter in the margin, and is attended with this remarkable advantage, that besides the conformity all the fingering has to the above general rules, it shows the learner in all progressions, what are the notes he is to quit his position at, to ascend to a given note, or to return to it, in descending. The scale of B♭, so often given above, may be taken as an instance: it is N°. 3 of the Appendix, and preceded by the keys C and F N°. 1 and 2, thereby reminding the learner that to arrive at B♭, he must first have taken C, then shifting take d_eb_F, which will bring him to the last position g_a B♭. Again to arrive at the E♭ of the next scale N°. 4 he must shift as before, at C and F, and lastly after B♭, which will take him to c_d E♭, only observing to change the intervals of the preceding position of B♭, from a first minor to a second, which will render it g ab_bb. And in the same manner are all the following keys arranged, and lead to each other, so that the learner will know in any part of the progression of a scale what his position and notes are, and how they correspond with other keys.

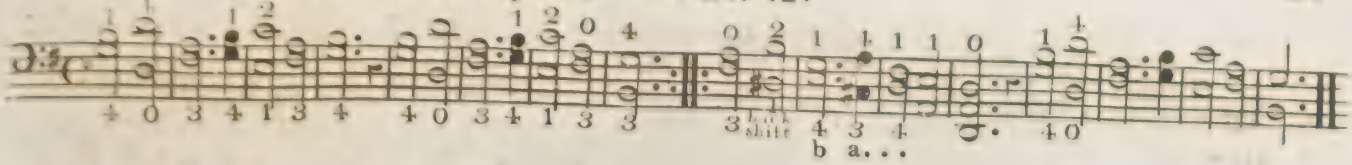
CONCLUSION with respect to Fingering.

§58. Very little experience will, or at least ought, to convince the learner that the upper part of the instrument, or thumb positions is of easier attainment than the lower; and it is perhaps from this circumstance, tho' not attended to by young performers, that they practice passages of show and execution on these positions to the neglect of the lower and more useful part of the instrument, whereby they are unable to do justice to an accompaniment, or to play the lower positions well in tune, which is to be accomplished by a different kind of practice, and a greater attention to pure and chaste harmony. Together with the practice of the more modern composers, the basses of Corelli and Handel should be studied, and the sounds occasionally checked and proved by each other. The more usual inaccuracies are, that the semitone betwixt the first and second fingers is too small; for instance that the e♭ of the first string is too sharp; this can easily be known and corrected by proving it with the open string D, the b again may be the means of ascertaining the g of the second string as thirds, which may again be proved by its octave the open string, &c. This examination, and the following practice, will tend to give to the hands the best position.

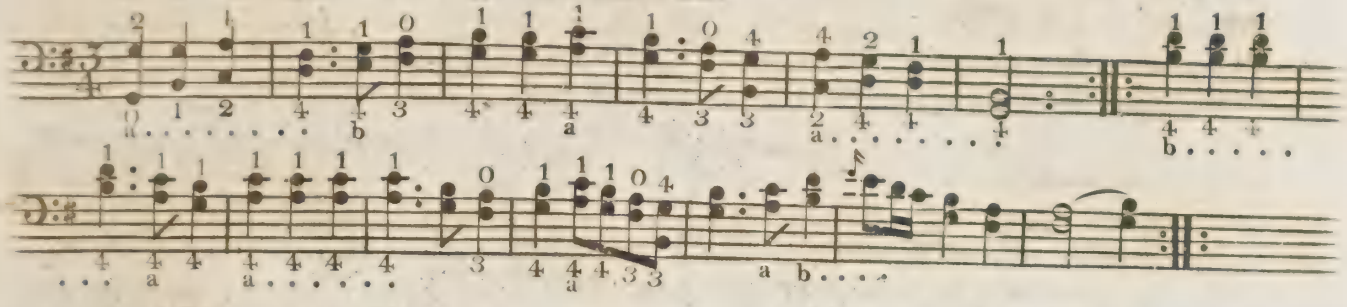
EX: 60.



Ex: 61. Pleyel's German Hymn. See Ex: 12.

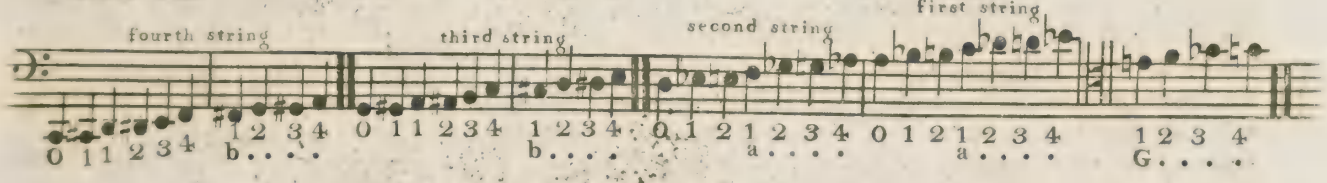


Ex: 62. God save the King. See Ex: 23.



§59. More of this practice will be found in the Appendix N° 98, which is Handel's march in Scipio in two parts, and N° 99 which is the French Air Ex: 20. The remaing part of that N^{o} is a variation of the same air by Luja, on the very highest part of the finger board, where the trick of octaves, and harmonics beyond the finger board, may be seen, But the following N° 100 is a variation of the same air in arpeggio much more improving; and it may be further observed that the original air Ex: 20 may be played in the octave, on a thumb position in D, without moving the hand, and the e taken with the fourth finger, and the next air Ex: 21. may be taken in the same position. The slow air N° 25 is also in the same position, and with respect to the e and f♯ which are beyond the octave, which is there taken on the whole shift; the 2^{d} and 3^{d} fingers, in a thumb position, are to be extended after the c of the preceding bar, to d— e —♯f without moving the thumb, and at the next c resume their position in the octave. It only remains to subjoin the following instances of semitones.

Ex: 63.



Of Bowing.

§60. As every effect and quality of sound on this class of instruments, that of tune alone excepted, depends immediately on the action of the bow, and not on the finger, as may be proved by an open string; the Learner who is desirous of producing the best sounds of which the instrument is capable, and who wishes to play with facility, ought to be more than usually attentive to the action and movements of his bow, and those of the arm, the wrist, and fingers of his bow hand.

1. Of the position of the arm.

§61. Let the arm, from the cape of the shoulder to the elbow, be brought on a line with, or parallel to the right side, and then raised almost to an horizontal position, which will be nearly perpendicular and parallel to the thigh in a sitting posture; and let the joint from the elbow to the fingers be parallel to the breast, and from that position be moved to the right, and then back to its former position, the elbow being kept in the same place. This done with the slowest movement is the manner in which the bow is drawn in the slowest notes, and proportionally smaller parts of the line thus described by the arm, and a quicker movement, for shorter notes. That part of the bow which is betwixt d and e fig: 14. the two joints of the arm being at a greater angle than a right angle, is the best position for executing the quickest notes, at first; which may be afterwards done betwixt c and d.

2. Of the different movements of the wrist.

§62. Let the bow arm be held steadily, for the sake of experiment, by the left hand, in a horizontal position, and the wrist be moved to the right, and afterwards to the left: the fingers will be in the direction of those at fig: 15. at the end of the first movement, and of those at fig: 14. at the end of the second, and proportionally for the minutest movement that can be given to the wrist. This serves to move the bow in either direction; and the movement of the arm §61 to extend it to the necessary length. Again, keeping the hand equally steady, let the fingers and wrist be moved upwards, and then downwards, till the knuckles of the second joint of the fingers are quite out of sight; this last position or depression of the wrist, will give to the bow when on the strings, a position nearly perpendicular, or somewhat less than at right angles with them, the least elevation possible of the wrist will raise the bow from any string to the next higher string, and an equally small depression will, of course, bring it down to a lower string; consequently, no elevation or depression of the arm can even be necessary to bow alternately on two contiguous strings.

3. Of the position of the fingers, and holding the bow.

§63. The bow is held betwixt the thumb on one side, and the middle finger opposite to it, which is to touch the hair of the bow, the others lying gently on it without pressure, merely to keep it in a given direction, and the fore finger a little separated from the second. By way of experiment let the bow so held, be moved by the left hand from the point of the fore finger to the end of the second joint, and back again to its former place near the point of the finger, as at fig: 14, and 15; and let the bow or a small stick held in this manner be moved across the back of the fingers of the left hand placed in the direction of the strings fig: 17. the principle will be easily discovered, by which the bow may at all times be moved on the strings at right angles with them, and avoid the direction a . . . . c at fig: 11; which improper direction, judging by that of the bow of almost every performer, would seem to be altogether unavoidable, and consequently it may be inferred, that any principle of counteracting this tendancy of it, must be to them unknown; yet the great advantages of the former and disadvantages of the latter method in performance, are scarcely to be conceived.

4. Of the pressure of the bow and causes of good tone

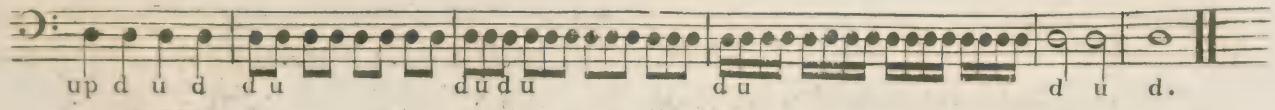
§64. Let the arm be placed as at §61, the bow held as at §63 be placed on the second string, and pressed by the fore finger on the string till the hair, screwed to a moderate tension, come nearly in contact with the wood of the bow; this is a degree of pressure that can scarcely ever be wanted, and yet requires no great exertion or force of the finger. Inferior degrees of pressure will give proportional degrees of vibration to the string, and produce sounds of equal or varied force or loudness, when the bow, with such equal or varied force, is put in motion. If the direction of the bow is kept as directed §63 the impulse given to the string being thus regular, and always at right angles with it, the sound thence arising, must be as pure in its quality as that proceeding from those given to it by the point of the finger in pizzicato §7, which is unexceptionably so.

§65. But effectually to command the vibrations of the first string, the arm and elbow must be brought still more forward than described at §61, and make an angle in [illegible] nally with the right side, so that the path of the bow, acting on this string, will be over

the right knee, and even still further from the breast; and for a similar reason it may be lower when acting on the fourth string, but so as to occasion the least movement of the arm, in going from one string to another. The following examples will serve to illustrate these principles and show their utility.

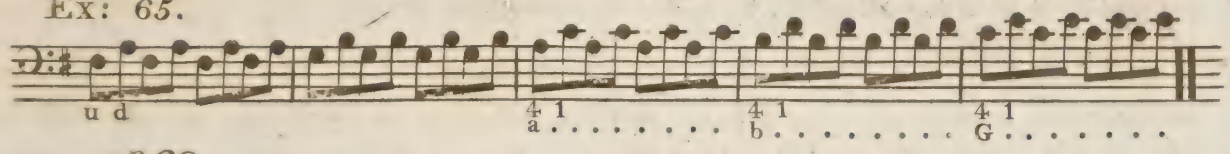
§66. Suppose the bow divided into 5 equal parts as at fig: 14. Let it be pressed on the second string at b, and drawn a down bow to d, and return an up bow with the same velocity and pressure to b; these two movements again repeated, will give four equal notes as in the first bar of the following example. Again let it be drawn to half the above distance with the same velocity; as from b to c, or c to d, it will give notes of half the former length, as in the second bar, and so proportionally shortened, will give the quicker movements of the third and fourth bars; and drawn from b to e it will give the minims of the fifth bar, and the whole length from a to f with a diminished velocity, will give the semibreve of the last bar.

Ex: 64.



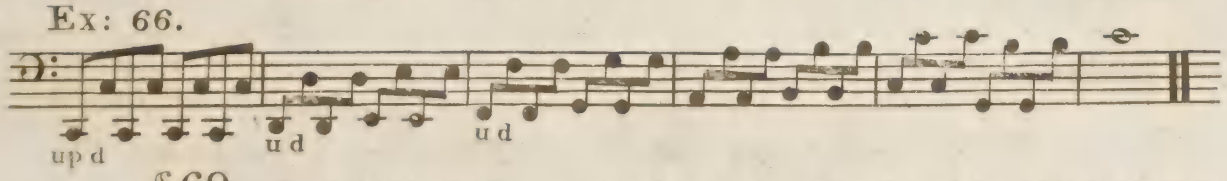
§67. When a considerable series, proceeds from a lower to an upper string, the up bow must begin, so as to have the most convenient turn of the wrist from left to right, for its elevation and depression (§62) and the passage must continue on the same two strings.

Ex: 65.



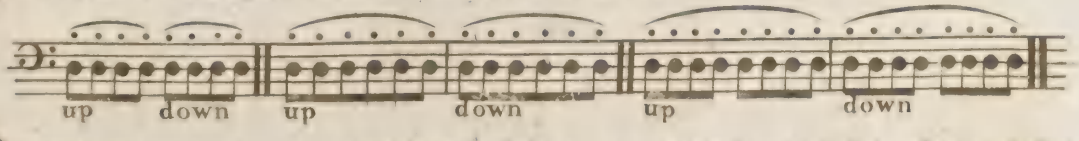
§68. The same courses assisted by the separate movement of the bow in the hand §63, especially when tried for some time with the fore finger off the bow, untill the right motion is acquired, will cross two strings, with very little or no elevation or depression of the arm.

Ex: 66.



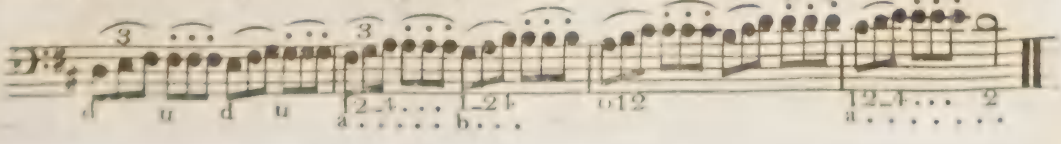
§69. In repetitions of one note, when not extremely quick or too long continued, the vibrations will be more pure, and the intended accent better expressed, by taking four or more notes with the bow in the same direction, disengaging the bow from the string after every note, in order to give a new impulse to the next.

Ex: 67.



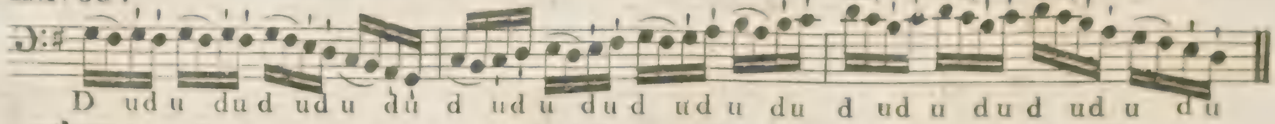
§70. The up bow being more adapted to the nature of this bowing, it is often used after a smart down bow, which will give to the subsequent up bow, a greater spring and quickness.

Ex: 68.



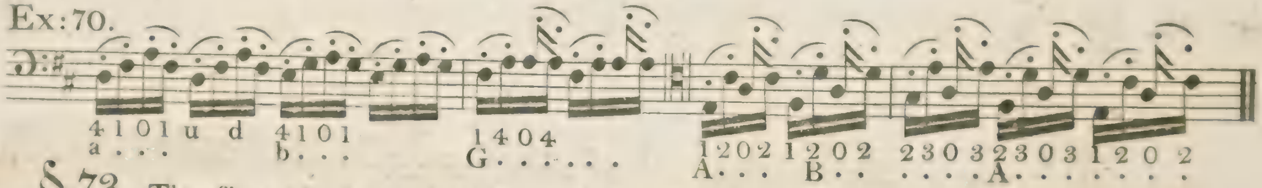
§ 71. Alternate bows, up and down, have more smoothness in them, when preceded regularly by two slurred notes, and this mixture produces a pleasing variety, after the monotony of a long succession of quick notes, where each has a separate bow.

Ex: 69.



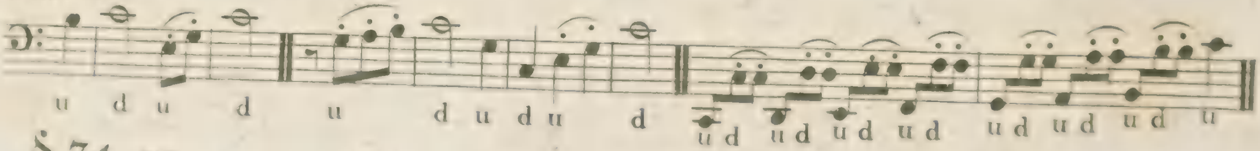
§ 72. In combinations of notes which lie on three different strings, as the three notes of a chord, in one position of the hand, divided or sprinkled into what is called an arpeggio; the bowing Ex: 67 and 68, from its rebound or spring, is capable, after some practice, of the most distinct articulation; but as it is necessary that such passage be always referred to three strings, two following notes cannot be taken on one string, and when the open string is one of the notes, care must be taken that neither of the others be taken on that string; in such case, or when a note is unison with the open string, the latter is generally written with its stem in an opposite direction to the others. After the following example is practiced, see N.º 100 Appendix for a variation of the air Ex: 20.

Ex: 70.



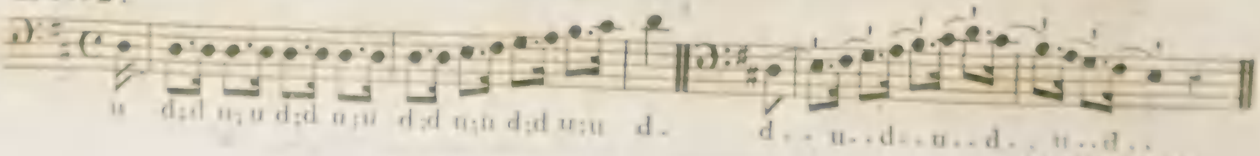
§ 73. The first of a bar, being always the accented note, is to have a down bow, and consequently the unaccented note or notes coming before it, must have an up bow. The number and course of the bows in a bar may be ascertained, by counting the notes under one arch or slur, as one bow, and every other note counted singly and alternately as to their courses. See after the following example, N.º 89 Appendix, at a and b an up bow, and c a down bow, which is to be the rule afterwards; see also N.º 88.

Ex: 71.



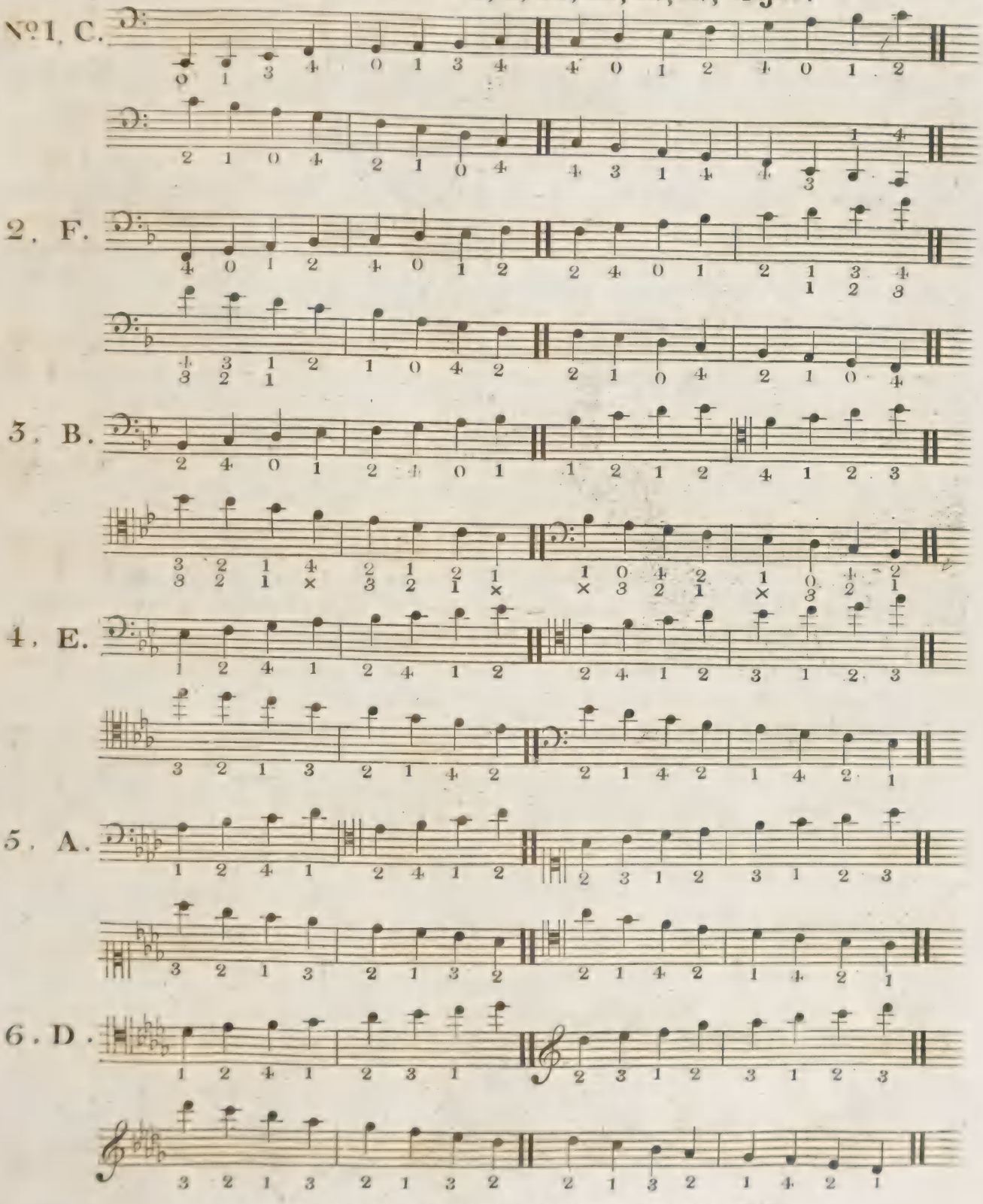
§ 74. When a very short unaccented, comes before an accented note, and the like is again repeated, the latter is not only to follow the former with the greatest quickness, but they must always have different and alternate bows. Thus after the first two, up bow and down bow, the next unaccented note must be taken after a short stop, with the remaining part of the down bow, and the following accented note with an up bow; the next two, up bow and down bow, &c: but when this succession of notes is slurred, the accented note is only marked by a stronger pressure of the bow and finger.

Ex: 72.



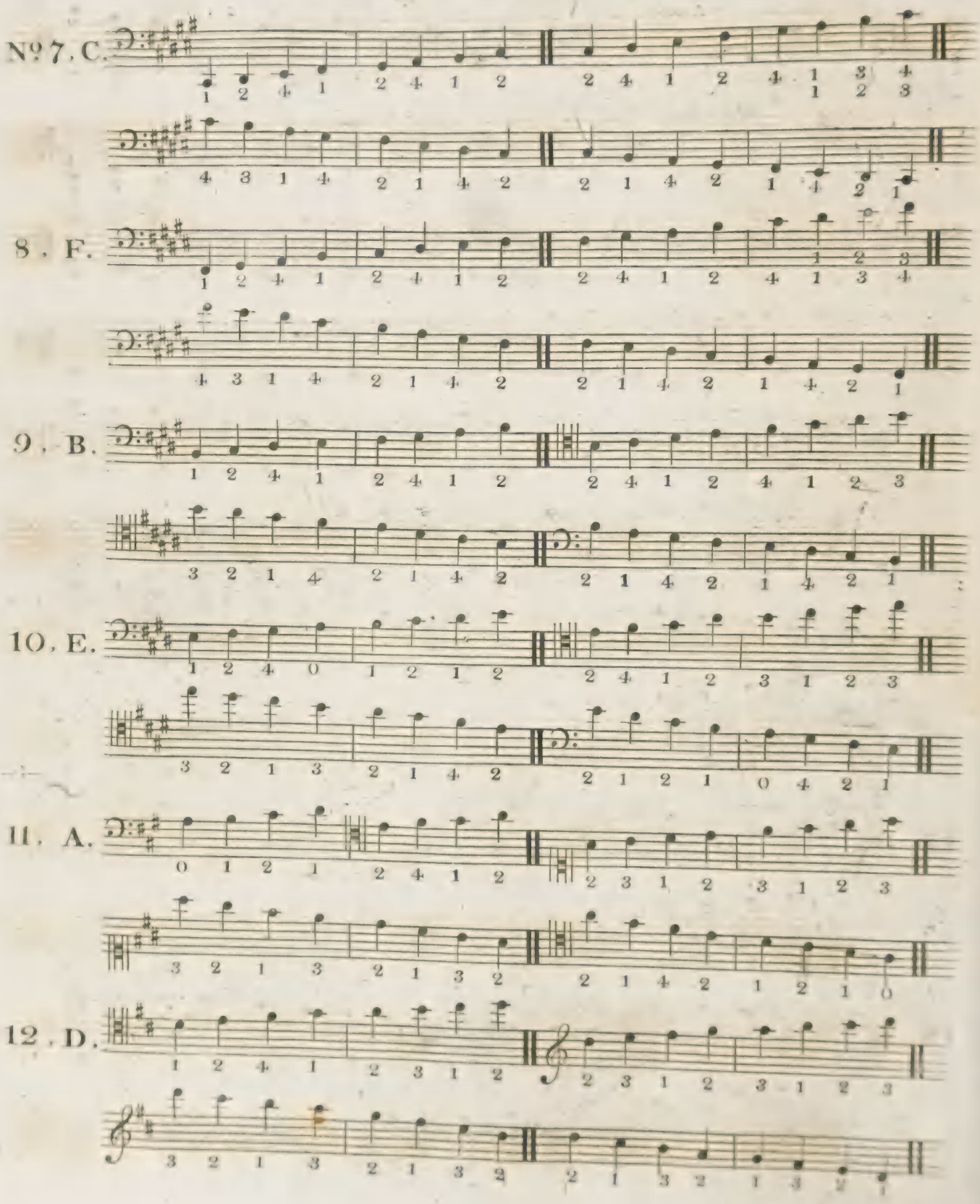
APPENDIX.

First Series C, F, B♭, E♭, A♭, D♭, Major.



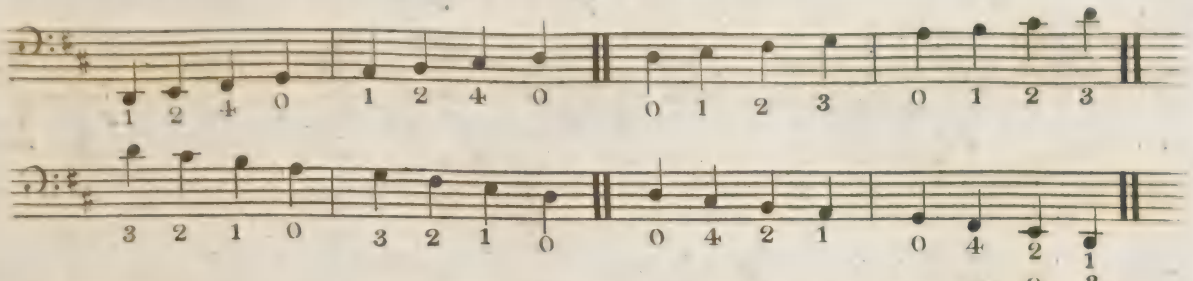
See the advantage and reason of this arrangement of keys § 57.

Second Series, C♯, F♯, B, E, A, D, Major.

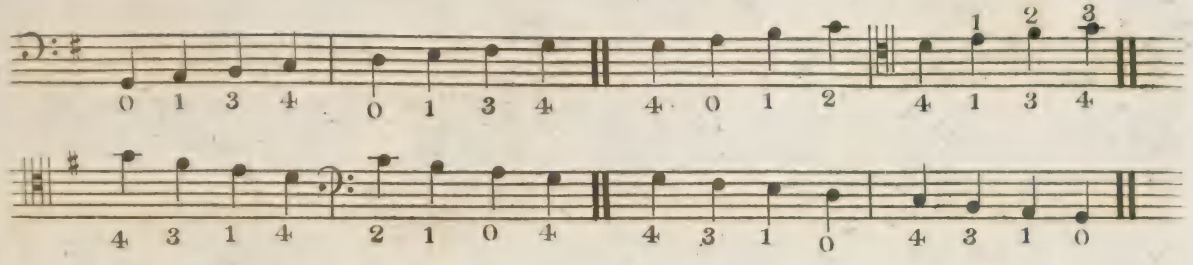


Third Series, D, G, C, F, B♭, E♭. Major.

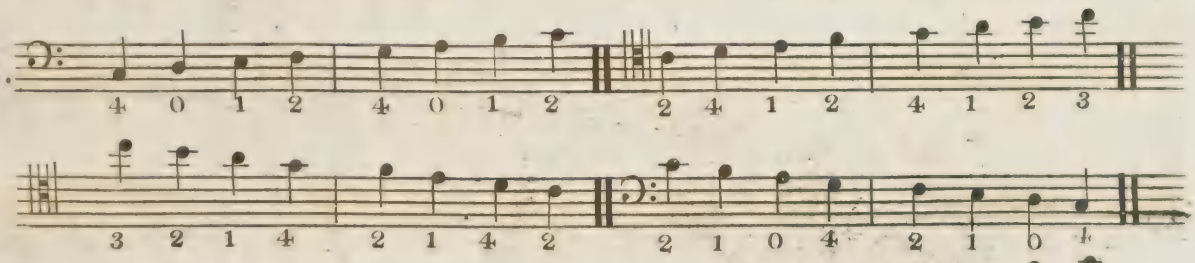
13. D.



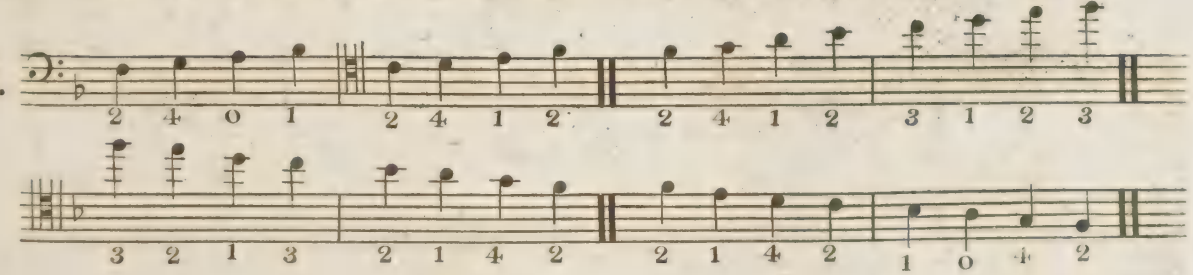
14. G.



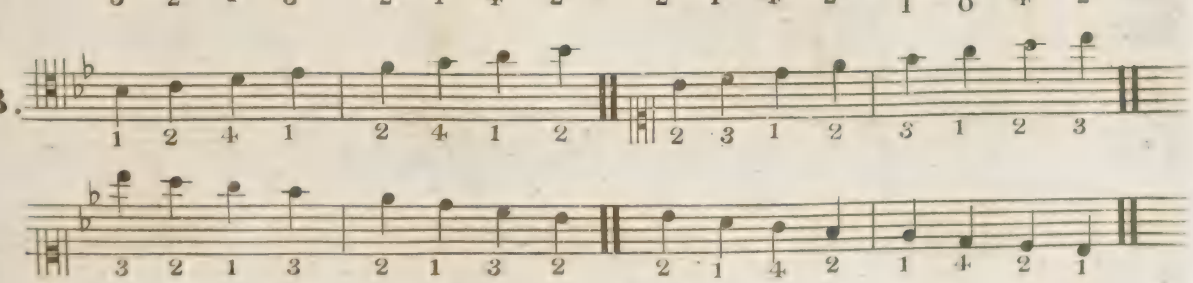
15. C.



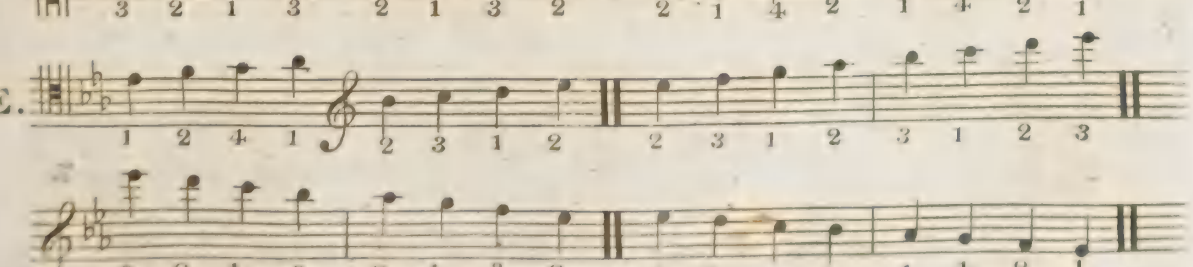
16. F.



17. B.

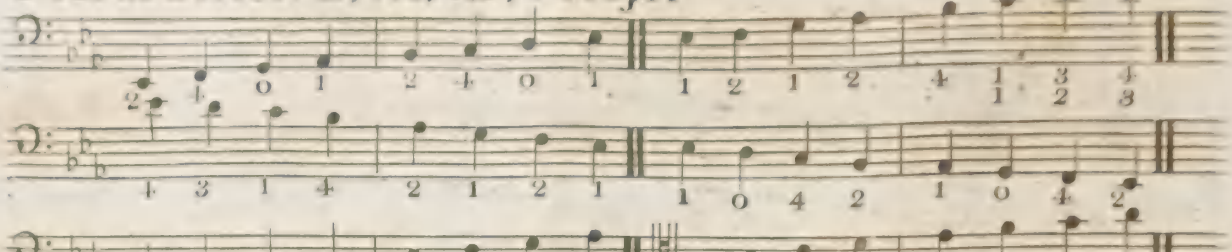


18. E.

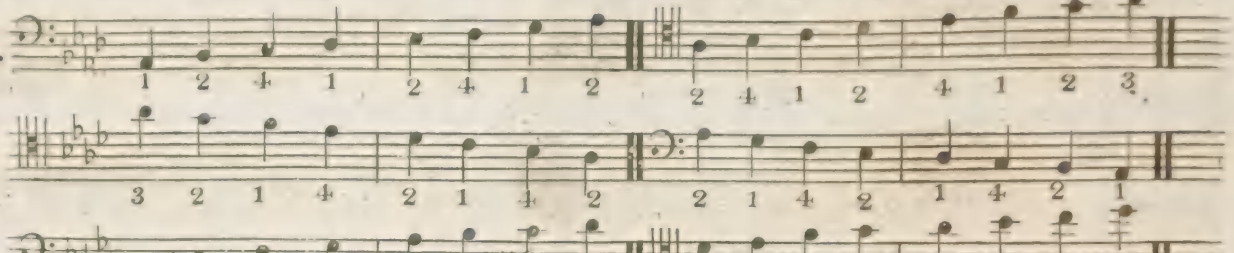


Fourth Series. E♭, A♭, D♭. Major

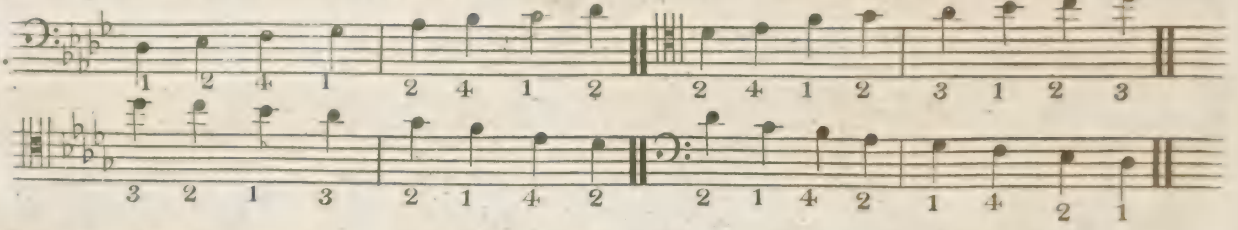
19. E.



20. A.

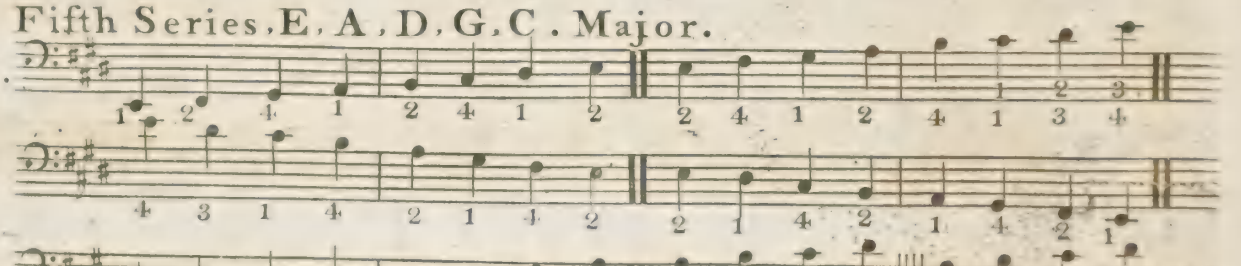


21. D.

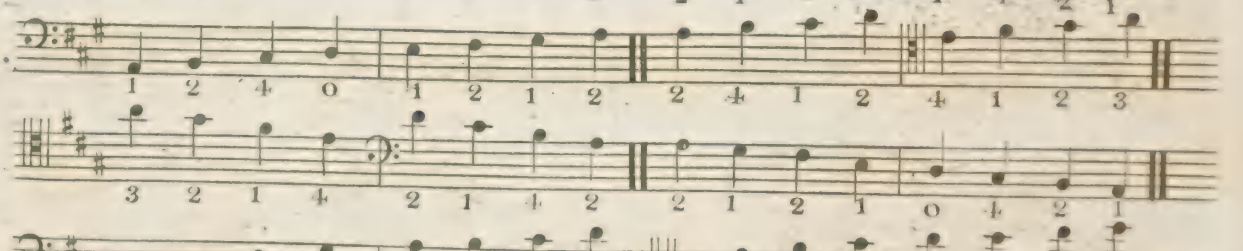


Fifth Series, E, A, D, G, C. Major.

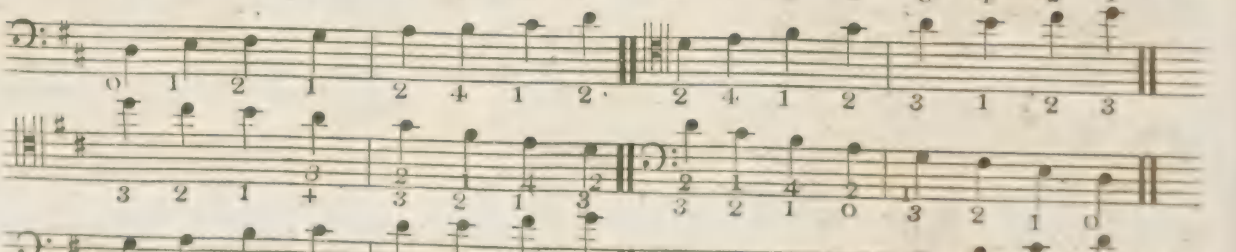
22. E.



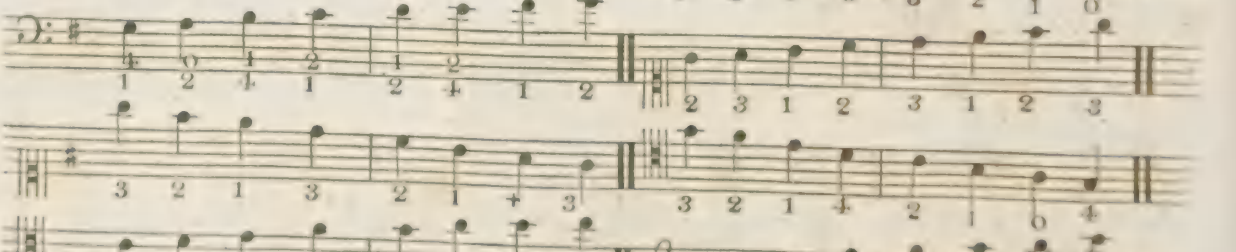
23. A.



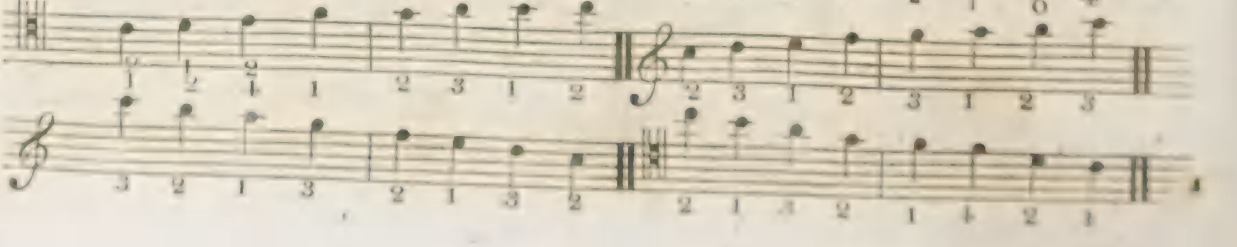
24. D.



25. G.

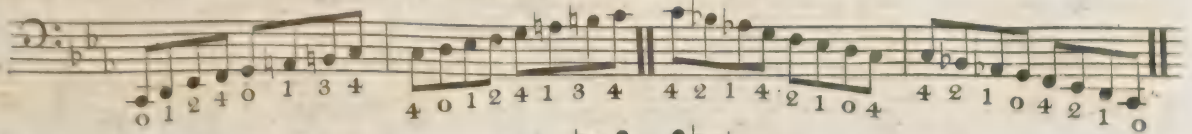


26. C.

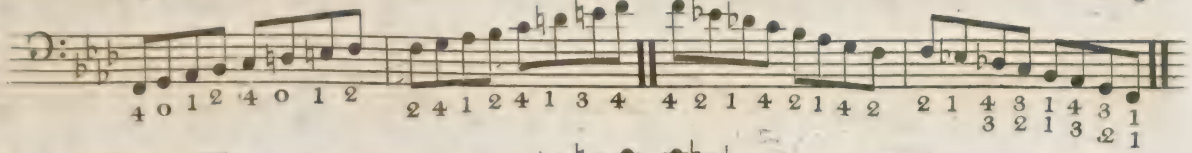


Firft Series. C. F. B♭, E♭, A♭, D♭. Minor.

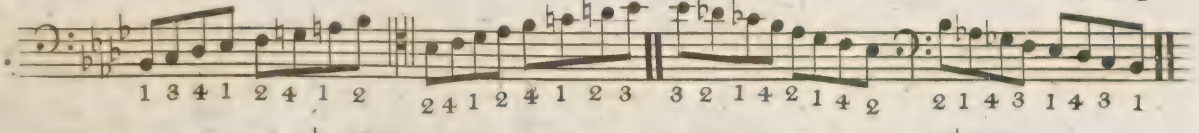
27. C.



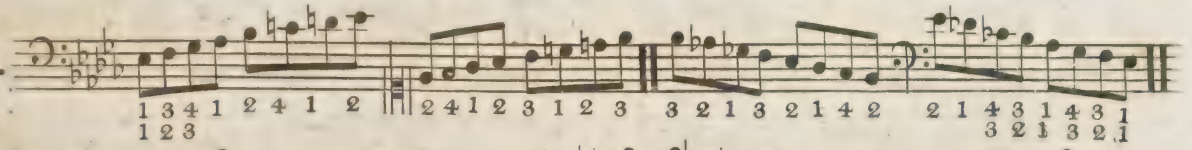
28. F.



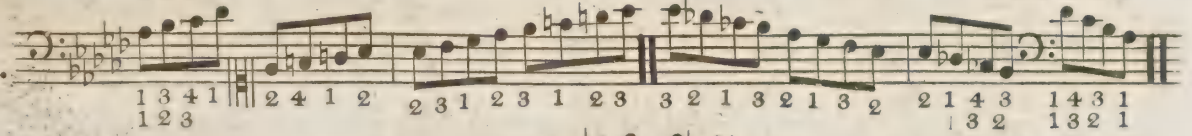
29. B.



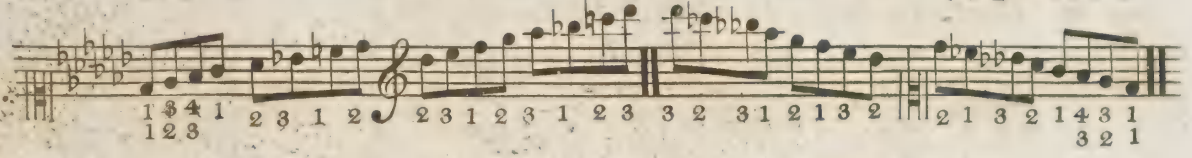
30. E.



31. A.

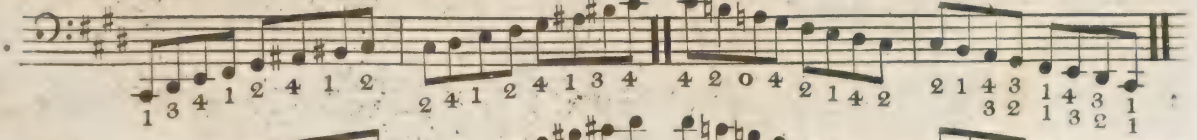


32. D.

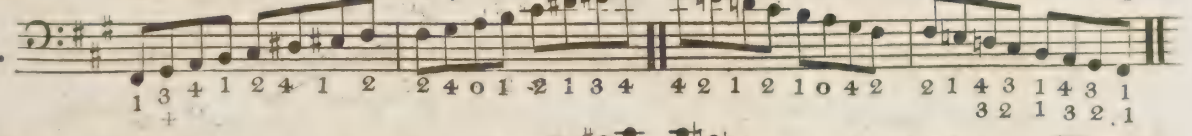


Second Series, C♯, F♯, B, E, A, D. Minor.

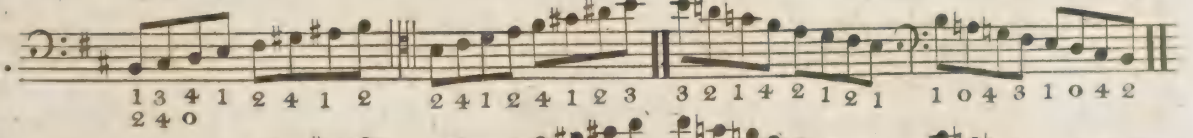
33. C.



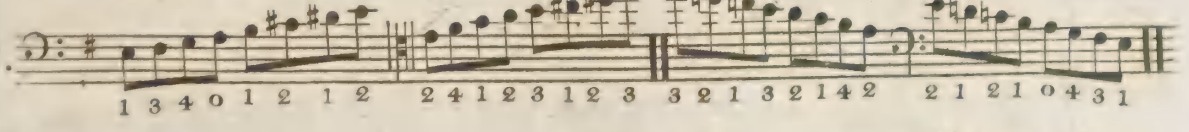
34. F.



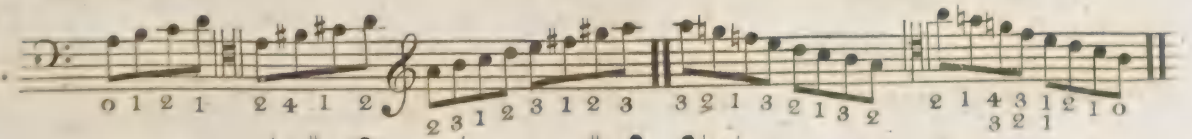
35. B.



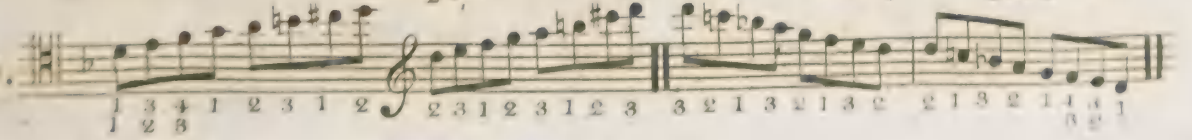
36. E.



37. A.

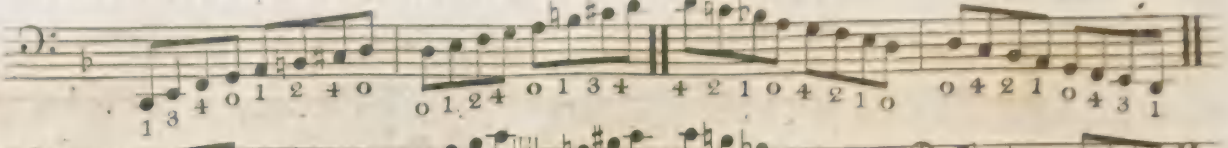


38. D.

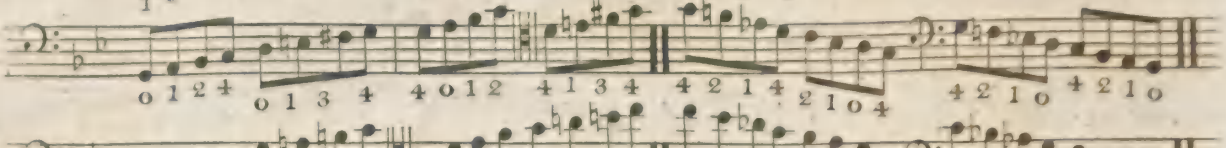


Third Series. D, G, C, F, B♭, E♭, Minor.

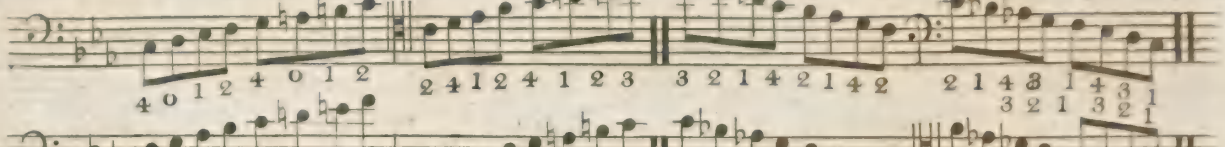
39. D.



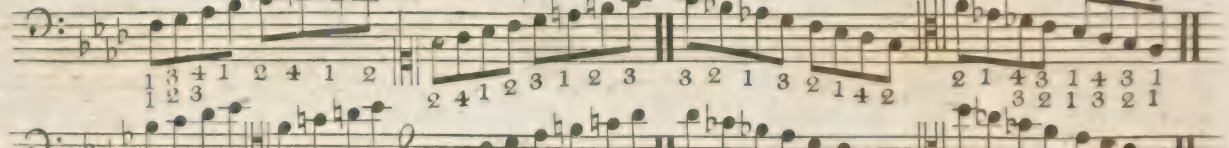
40. G.



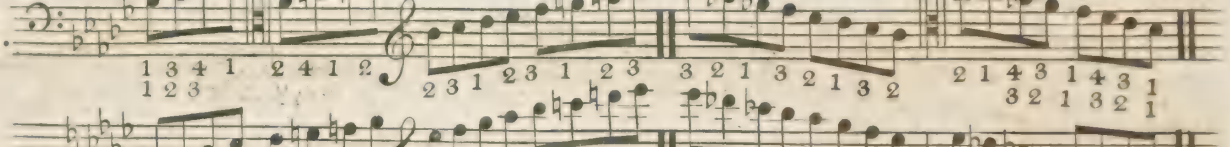
41. C.



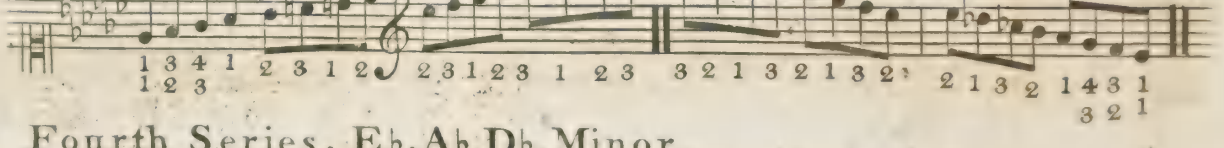
42. F.



43. B.

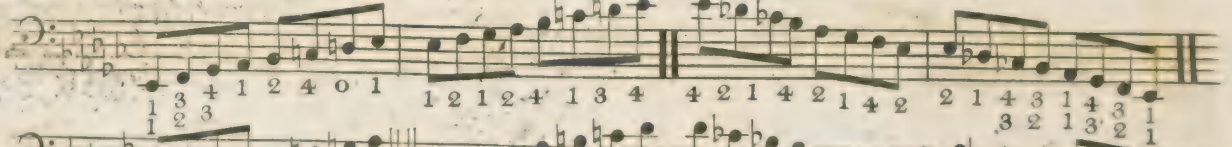


44. E.

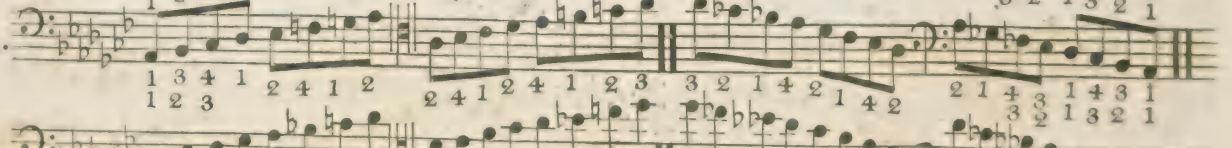


Fourth Series. E♭, A♭, D♭, Minor.

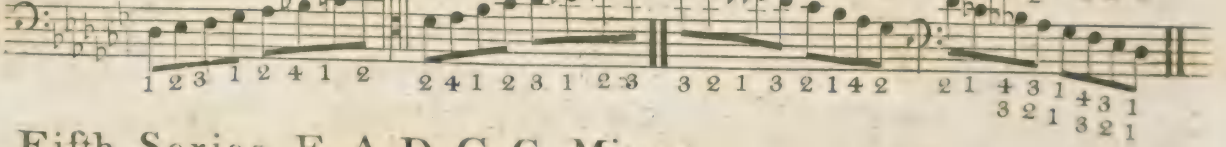
45. E.



46. A.

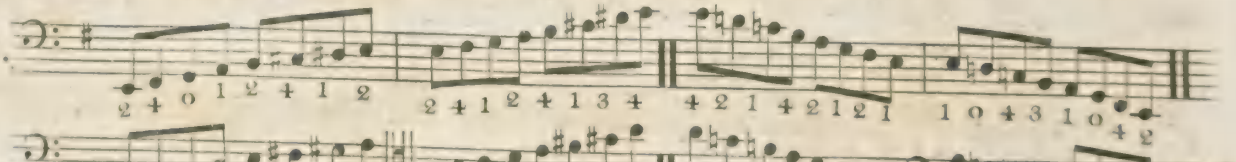


47. D.

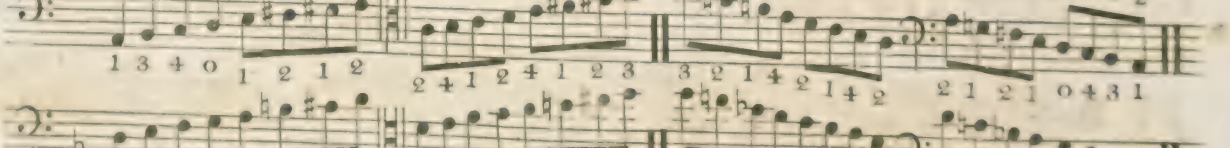


Fifth Series. E, A, D, G, C. Minor.

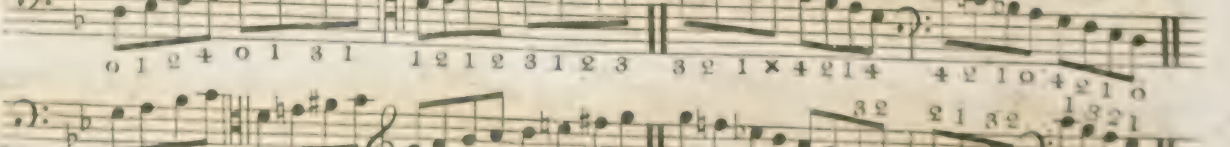
48. E.



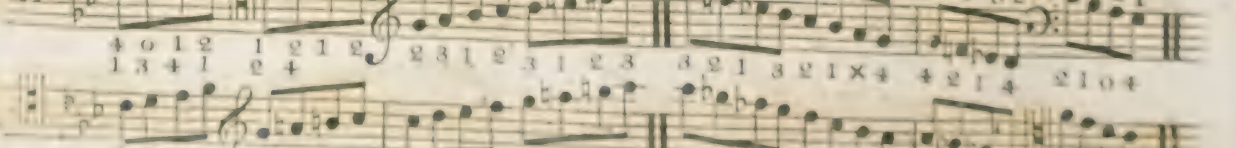
49. A.



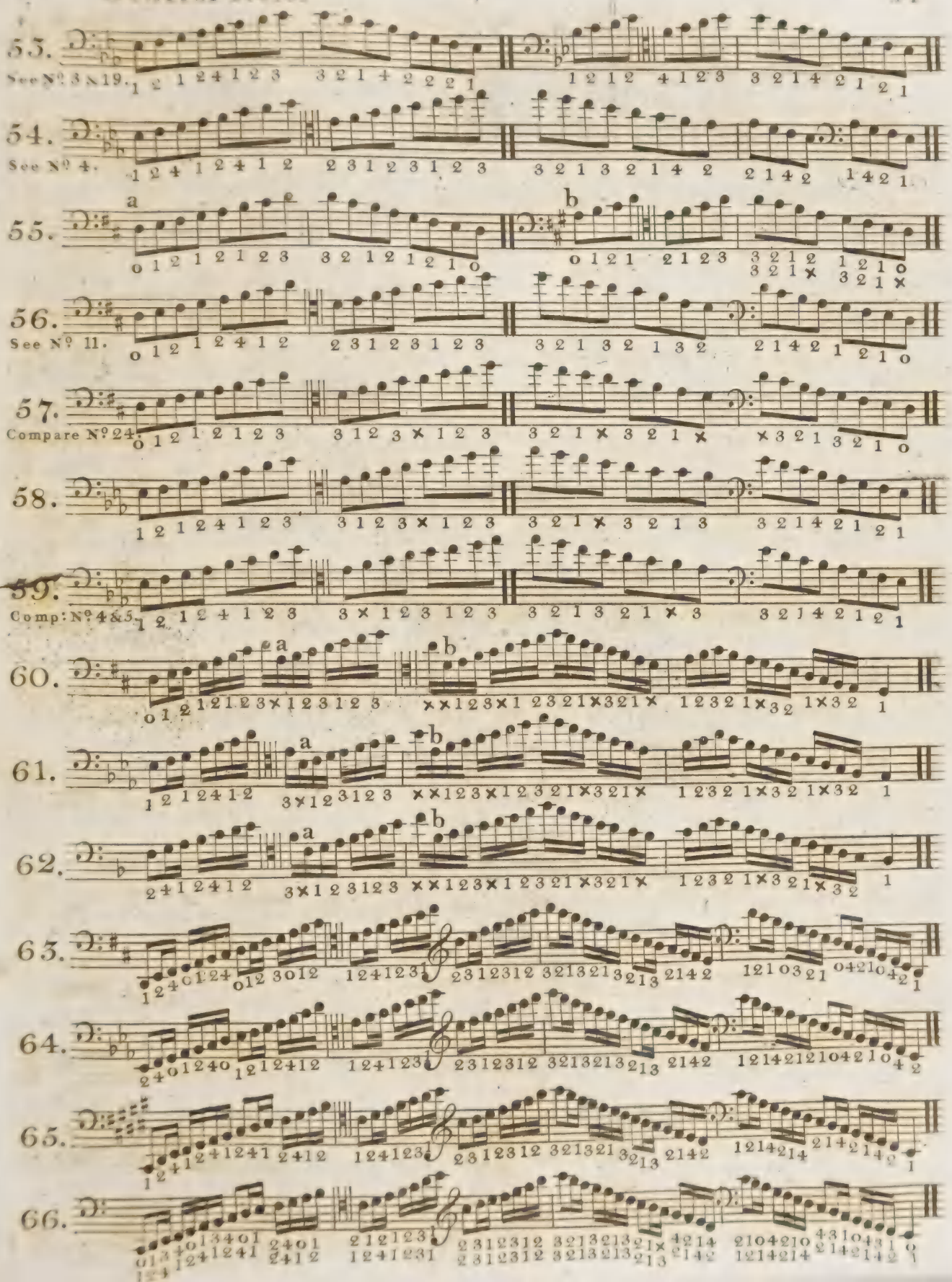
50. D.



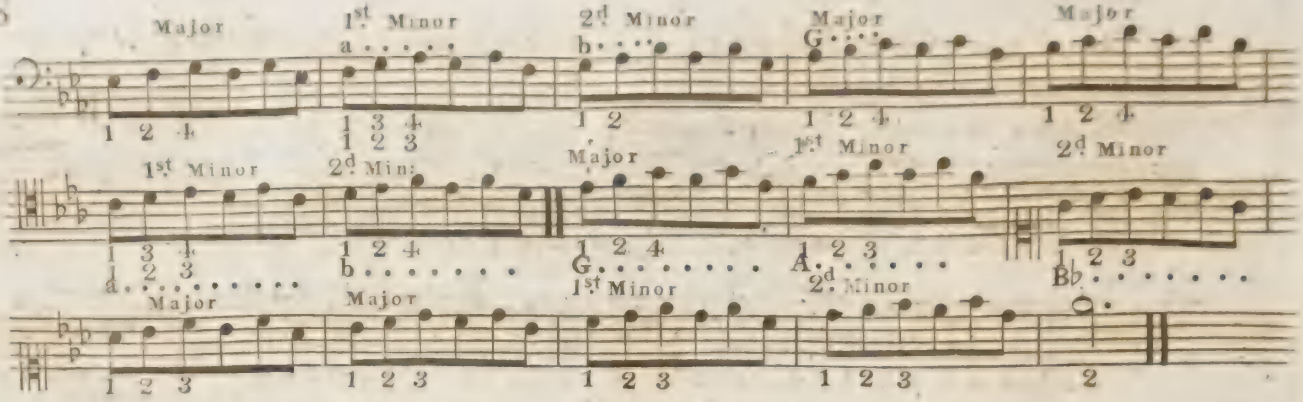
51. G.



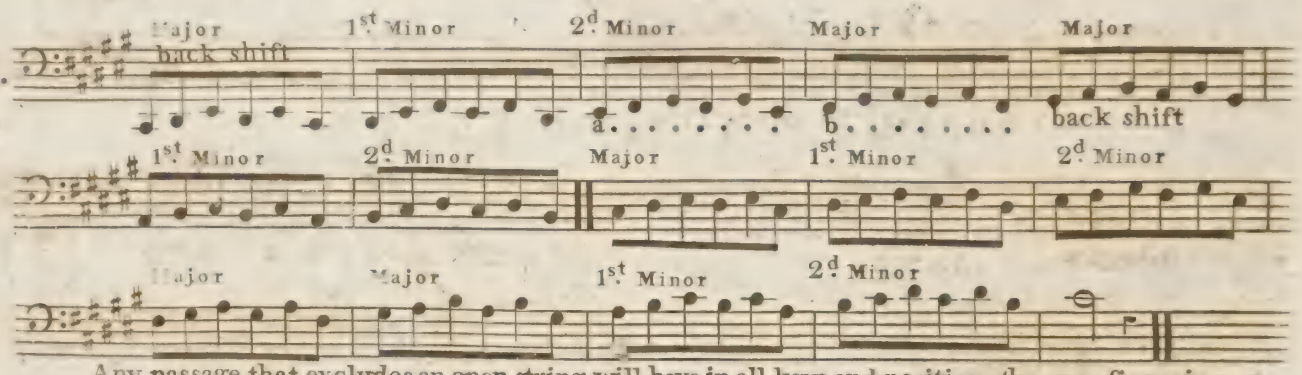
52. C.


53.
See Nº 3 & 19.
54.
See Nº 4.
55.
56.
See Nº 11.
57.
Compare Nº 24.
58.
59.
Comp: Nº 4 & 5.
60.
61.
62.
63.
64.
65.
66.

67.

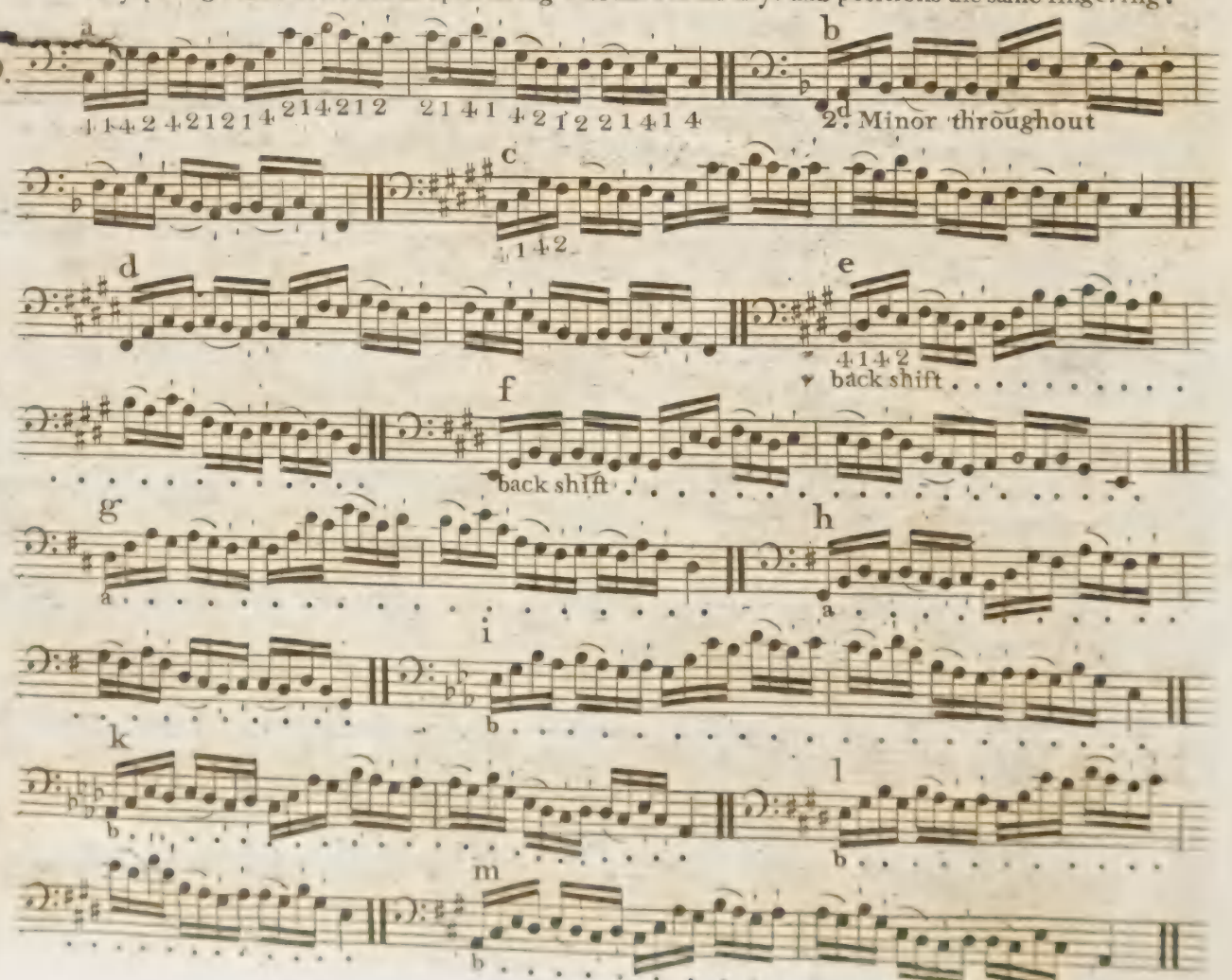


68.



Any passage that excludes an open string will have in all keys and positions the same fingering.

69.

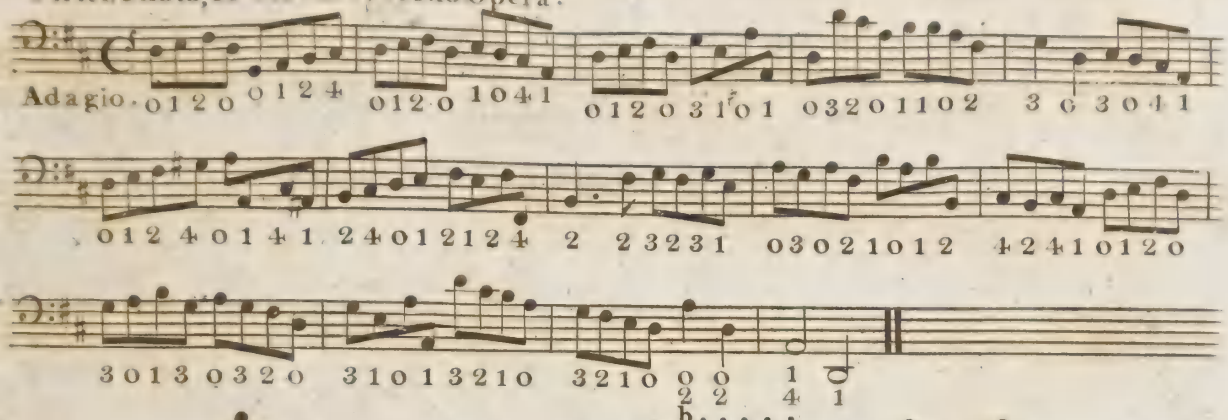


The Practice of Fingering, in Examples from the best Authors.

PRELUDIO.

First Sonata, of Corelli's second Opera.

70.



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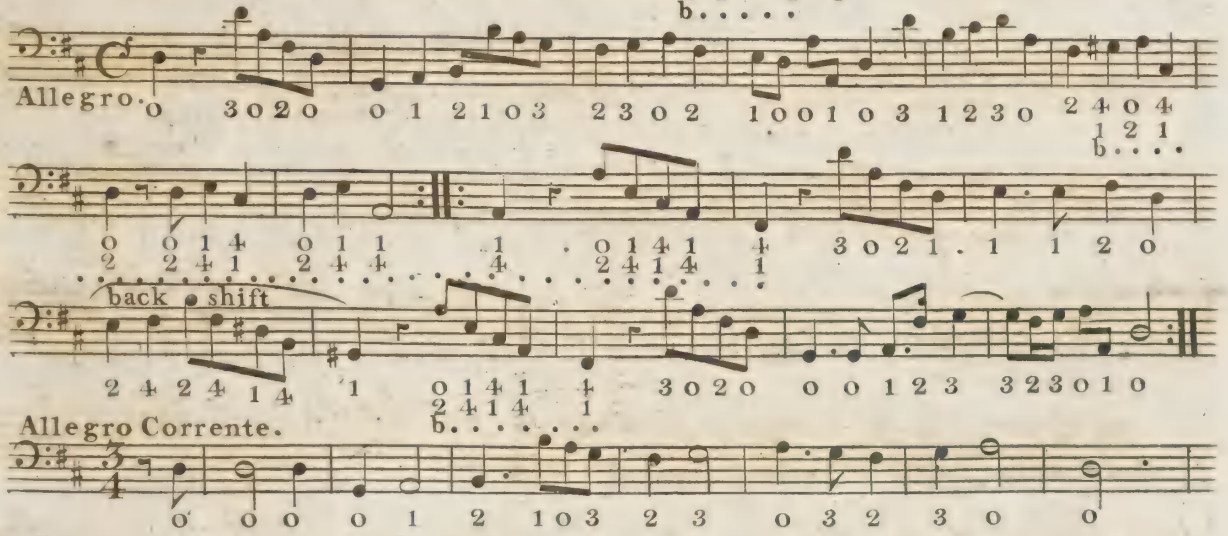
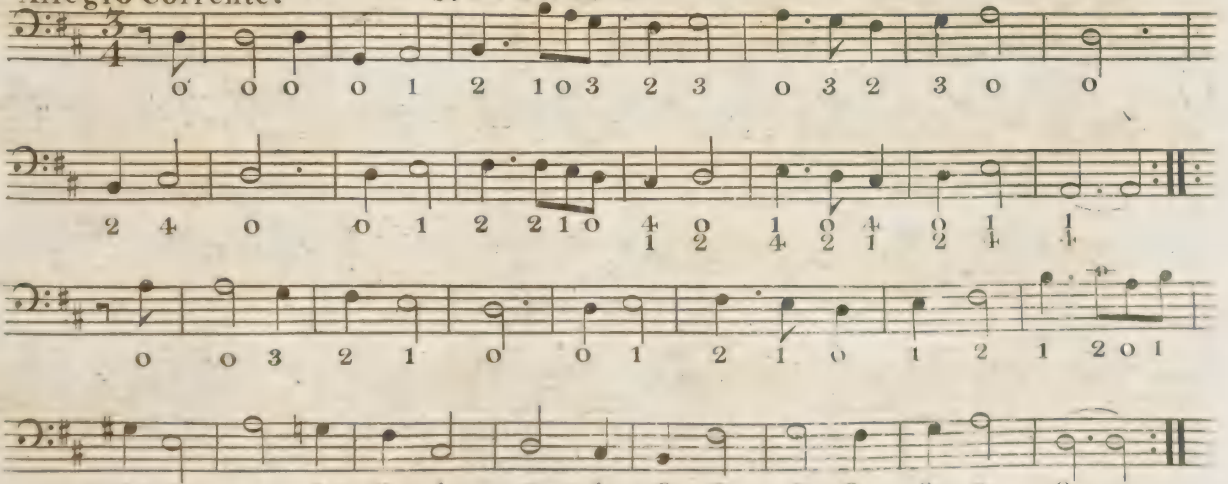


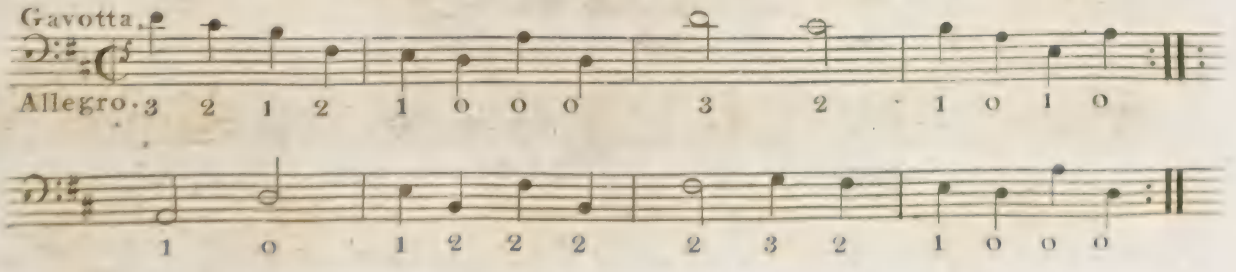
Allegro Corrente.

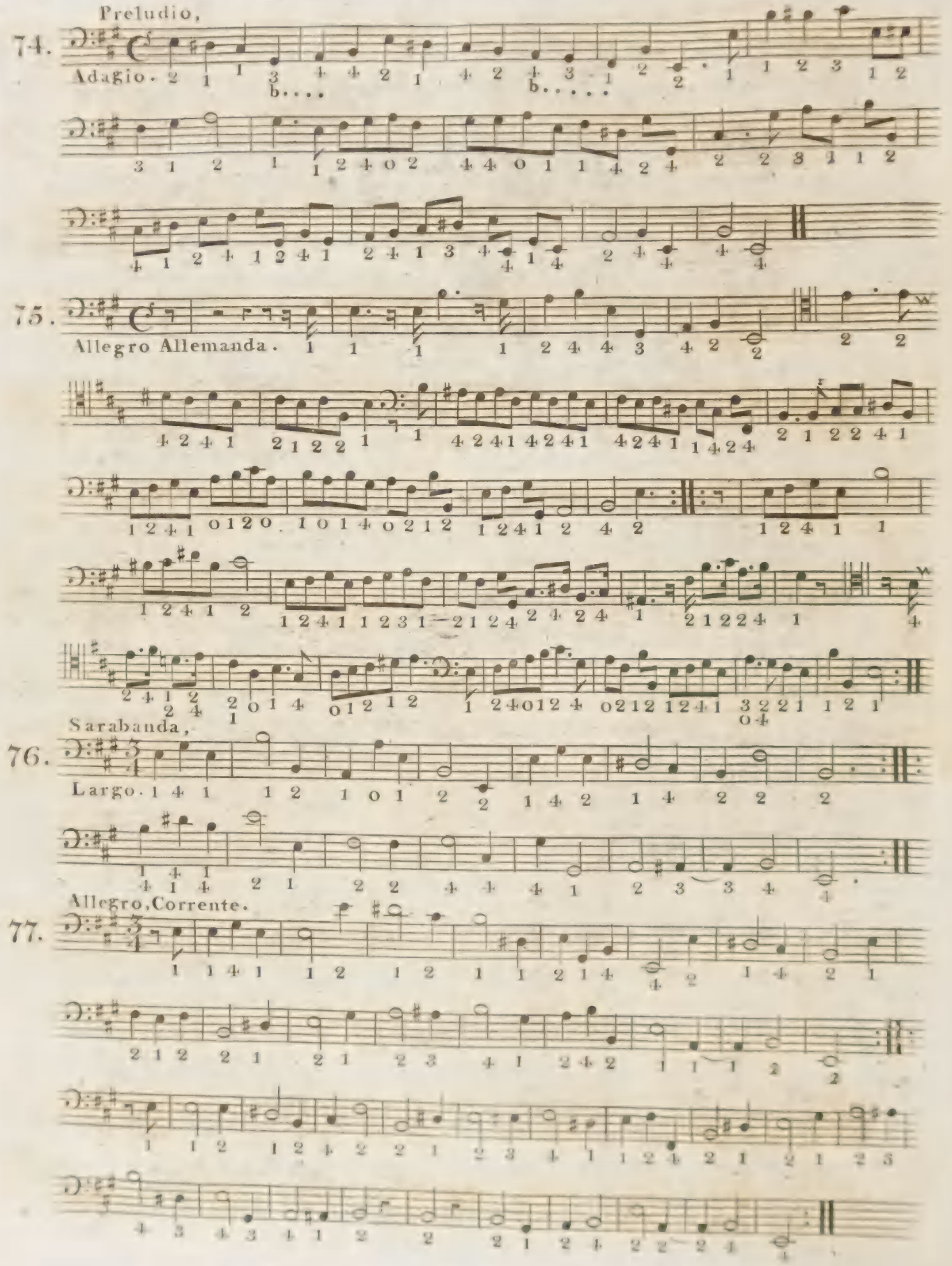
72.



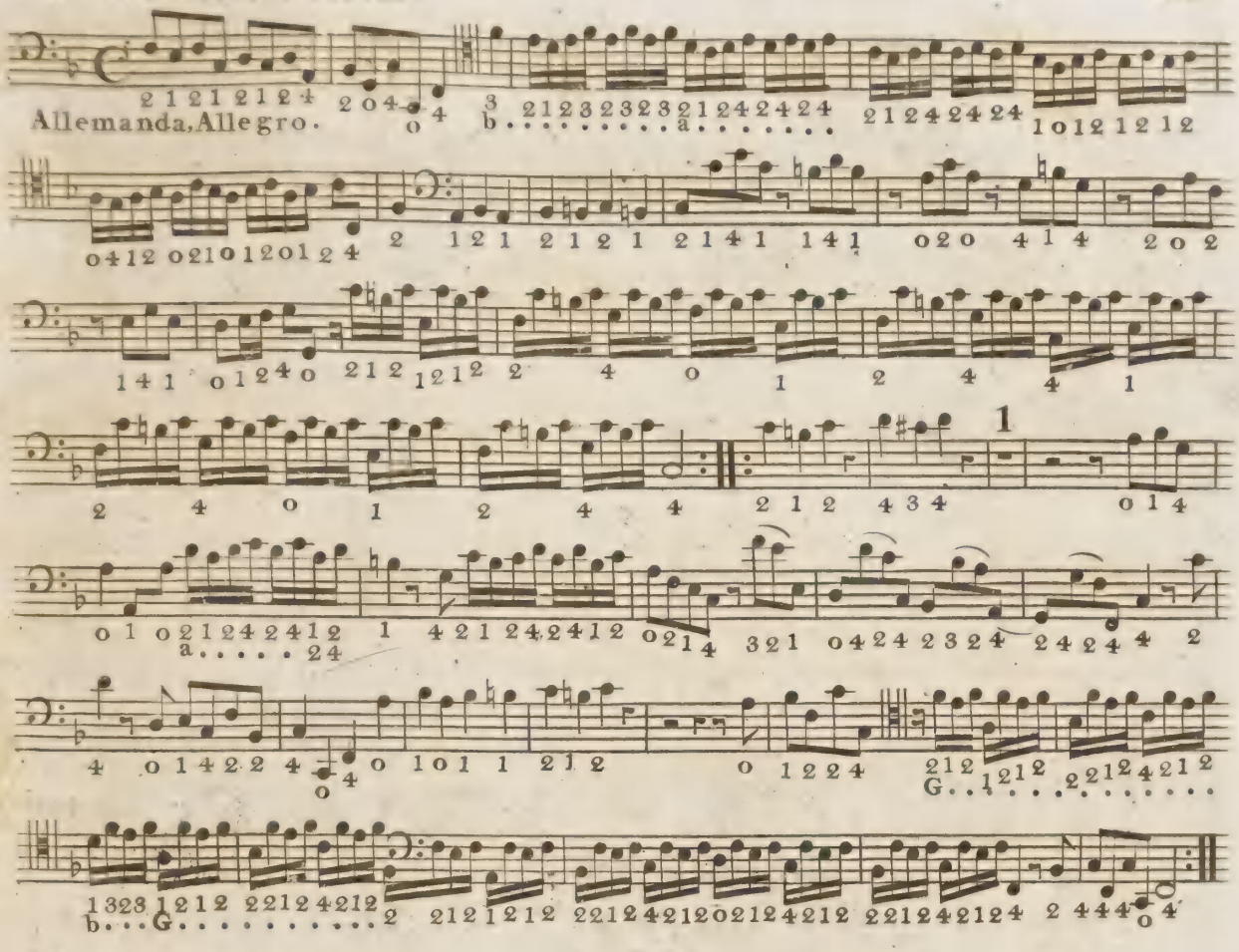
Gavotta.

73.



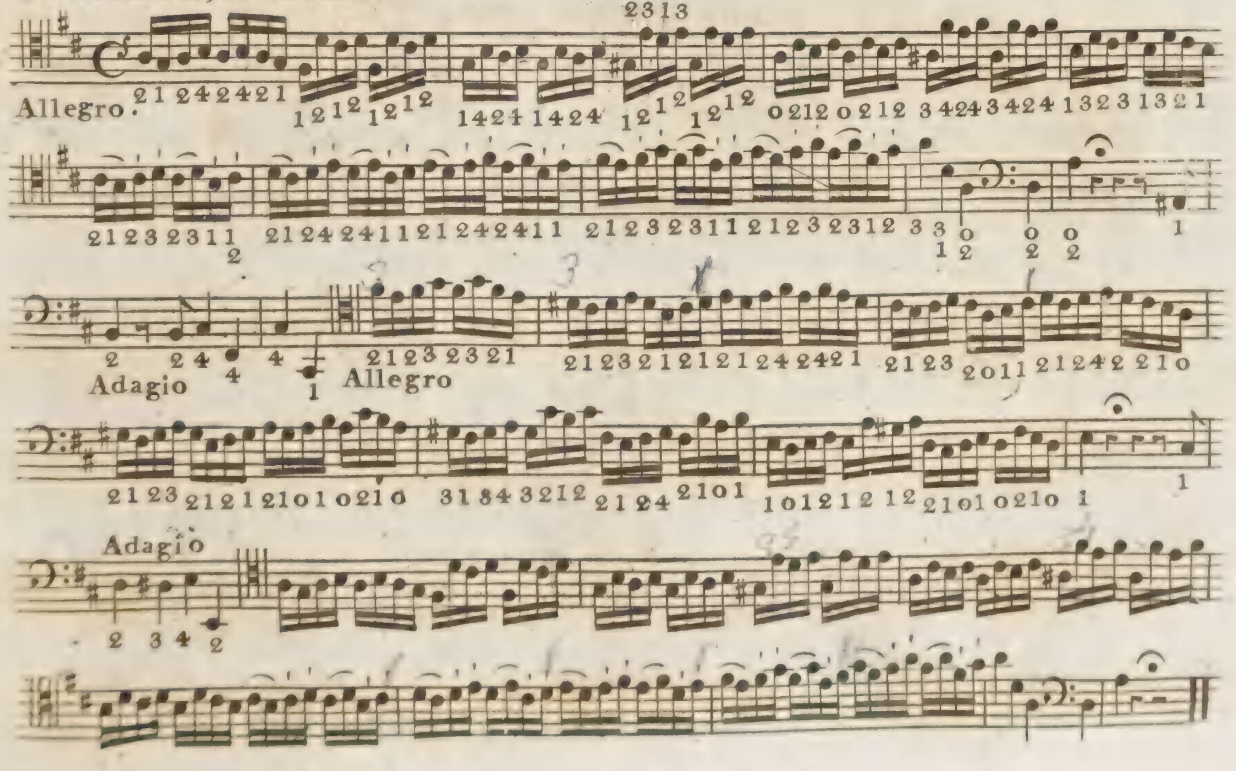

Preludio,
74.
Adagio.
75.
Allegro Allemanda.
Sarabanda,
76.
Largo.
Allegro, Corrente.
77.

78.



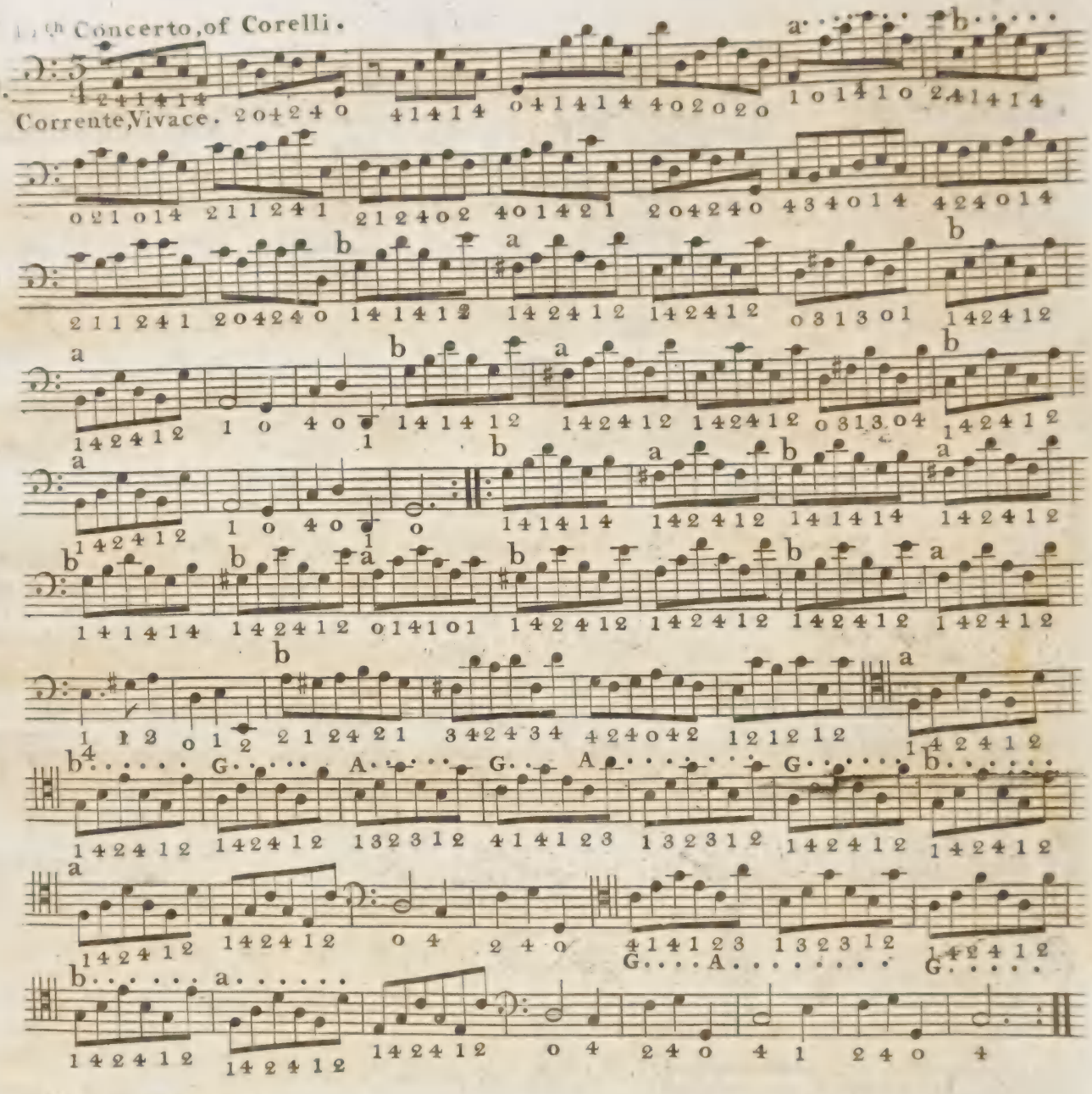
1st Concerto, of Corelli.

79.



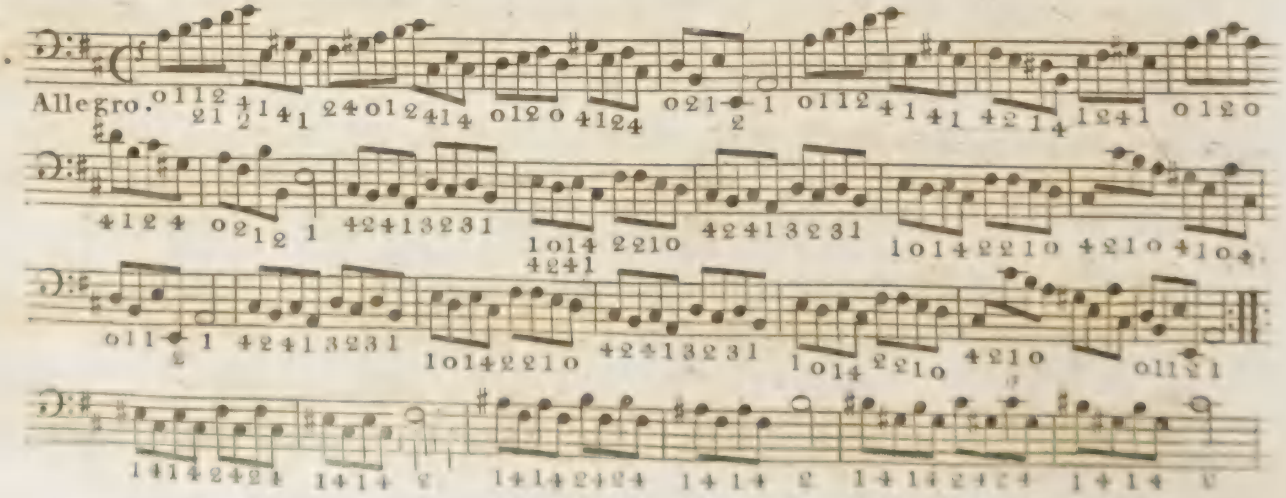
12th Concerto, of Corelli.

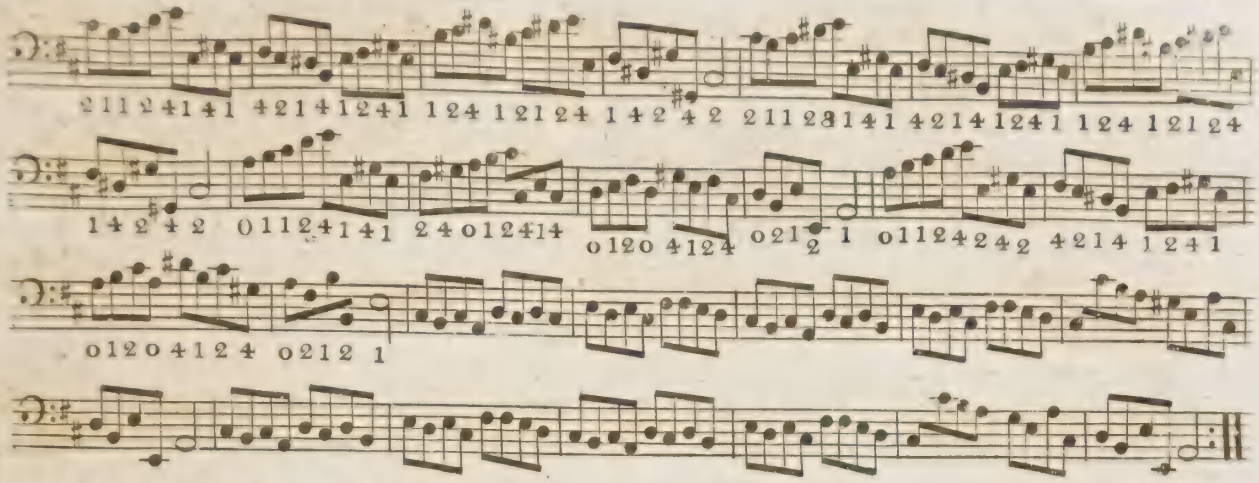
80.



9th Solo of Corelli.

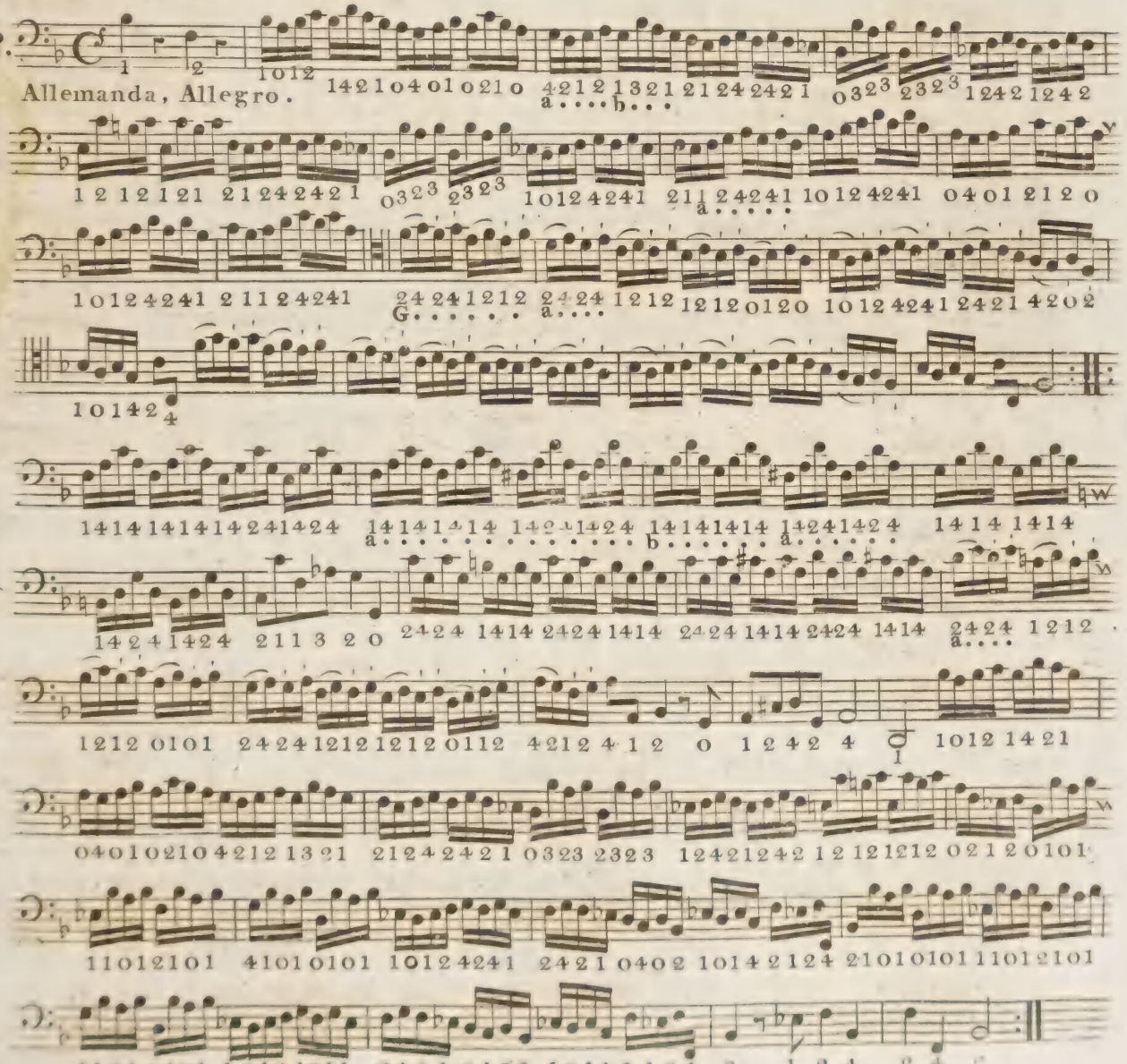
81.



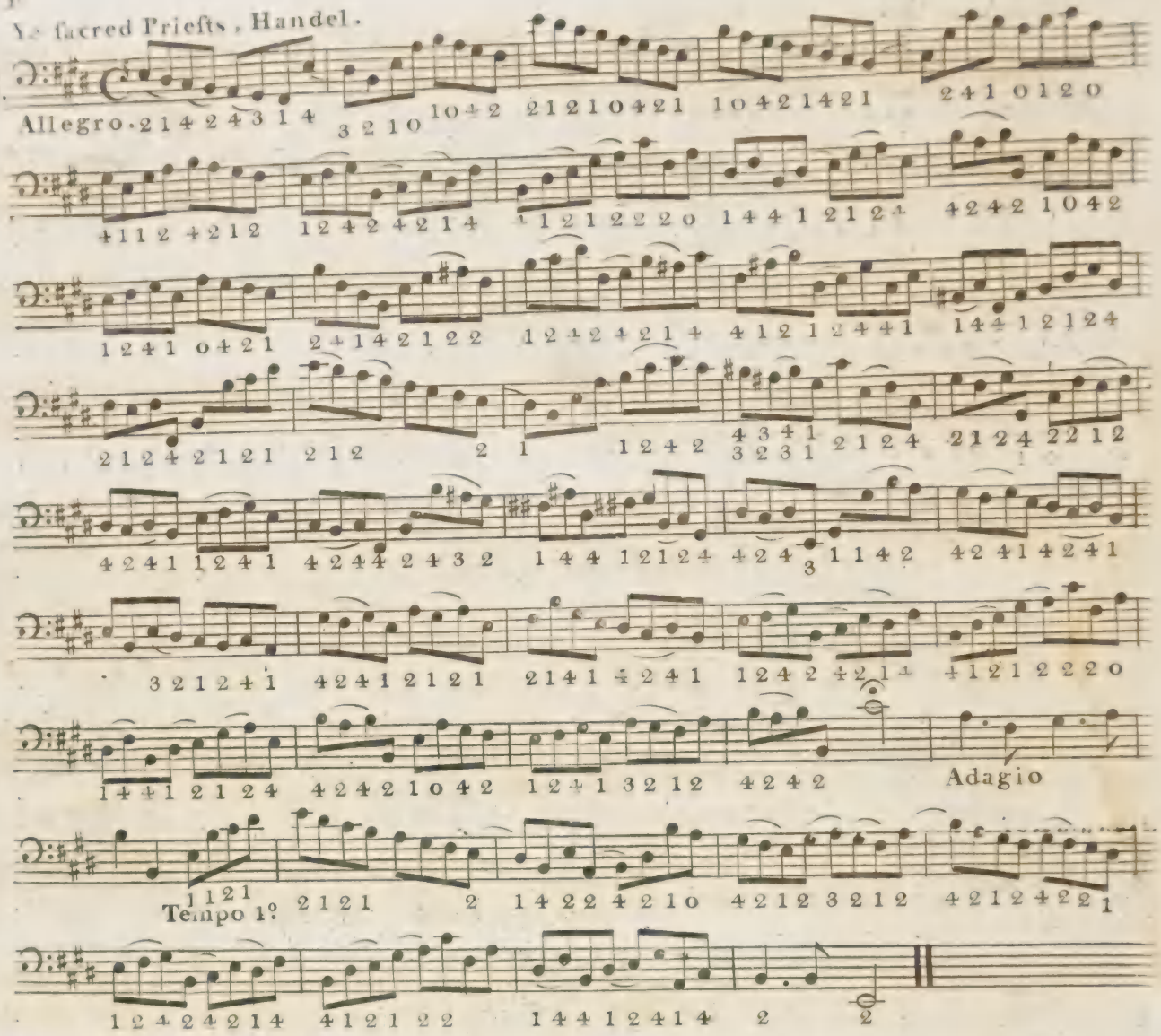


The 11th Concerto of Corelli.

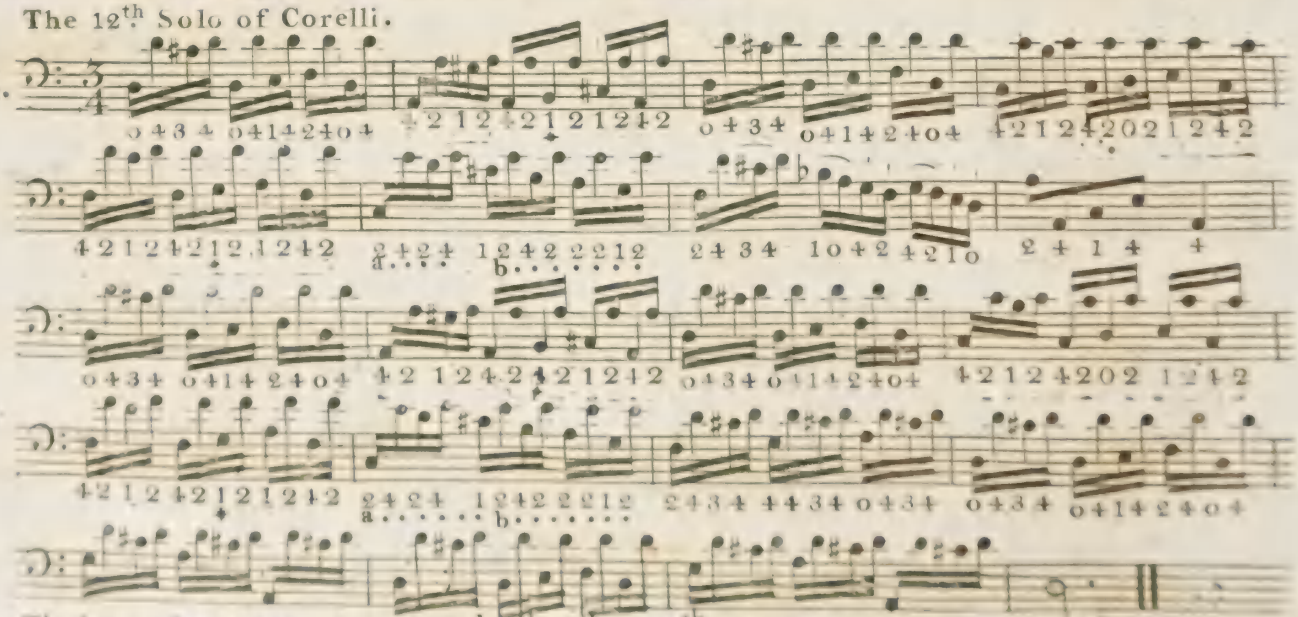
82. Allemanda, Allegro.



83. Ye facred Priefts, Handel.

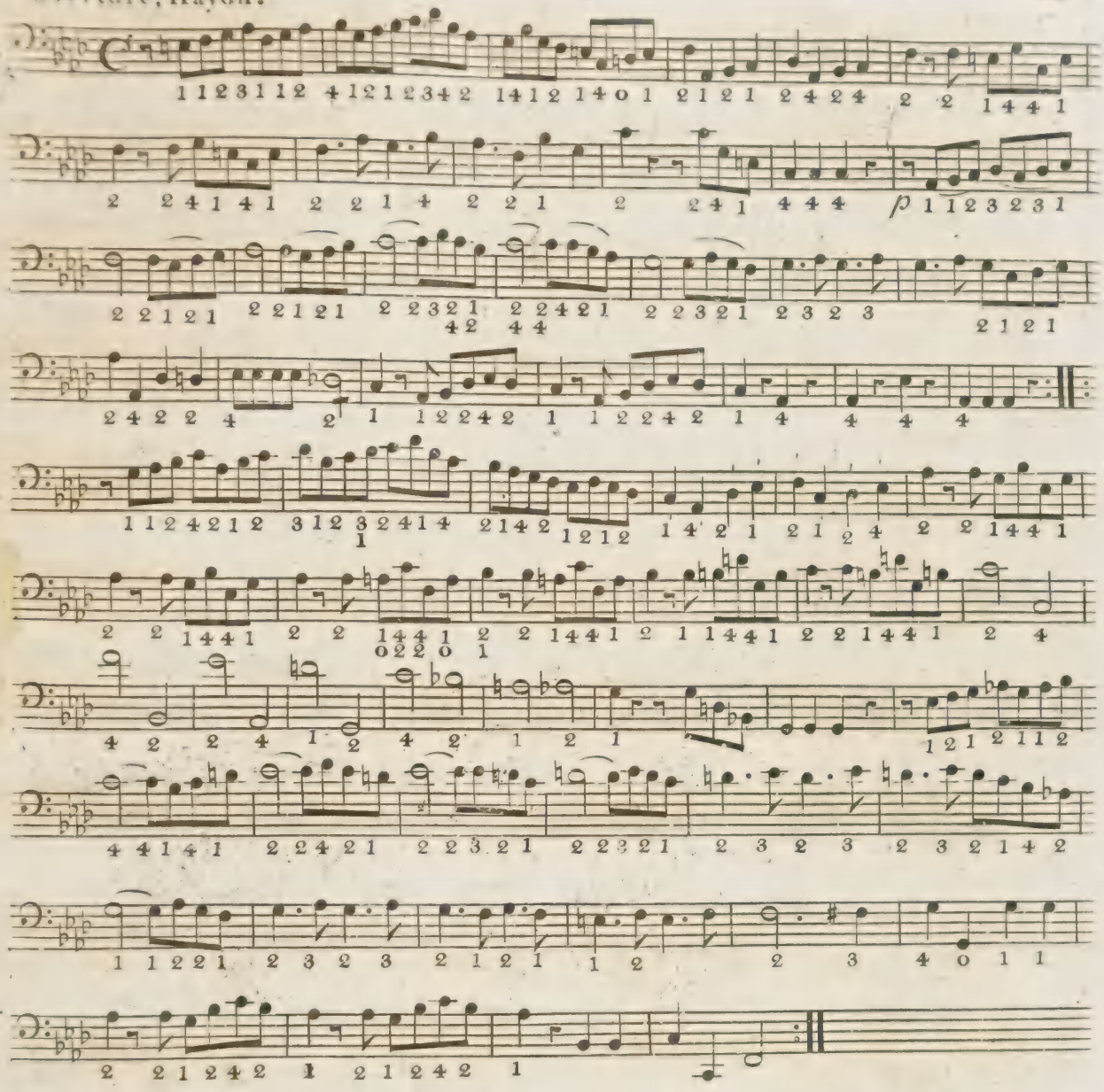


84. The 12th. Solo of Corelli.



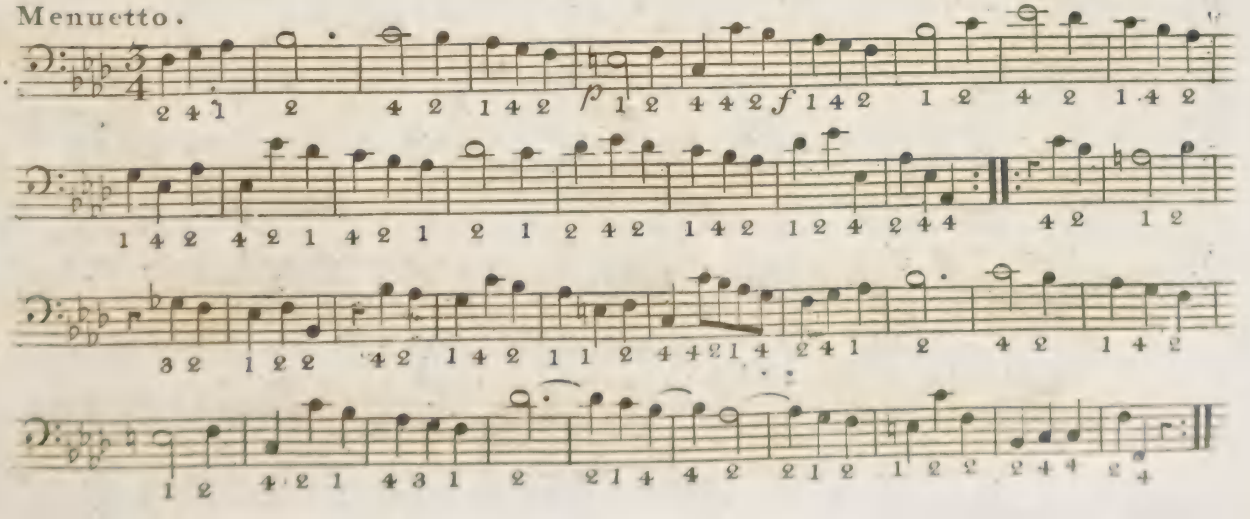
The interval of a seventh in the 2d. 5th. 10th. and 13th. bars is taken by extending the 1st. finger back.

85.

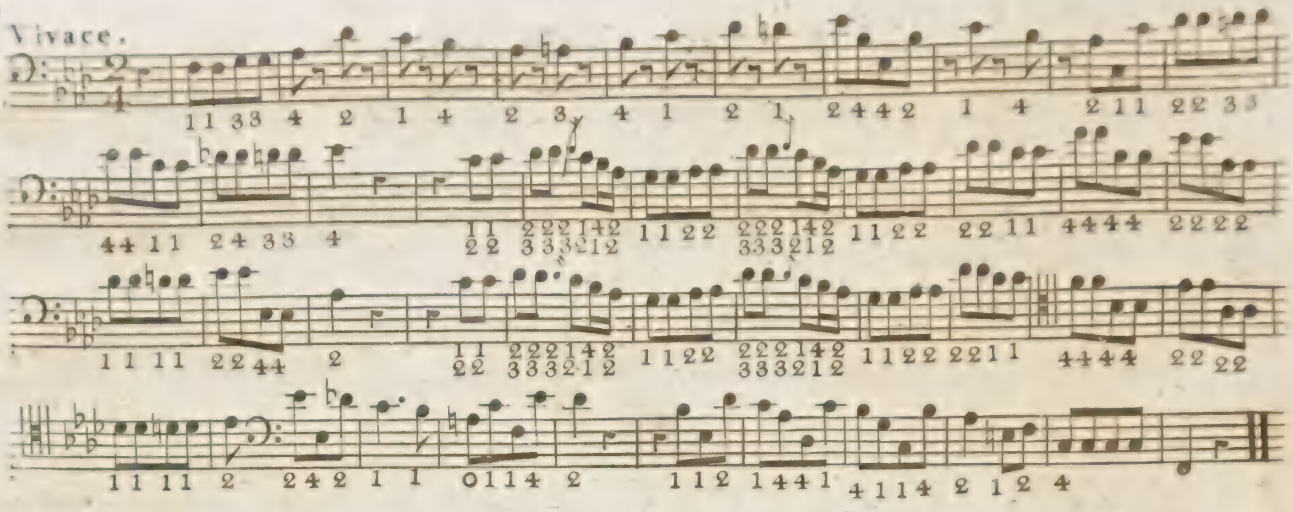


Menuetto.

86.

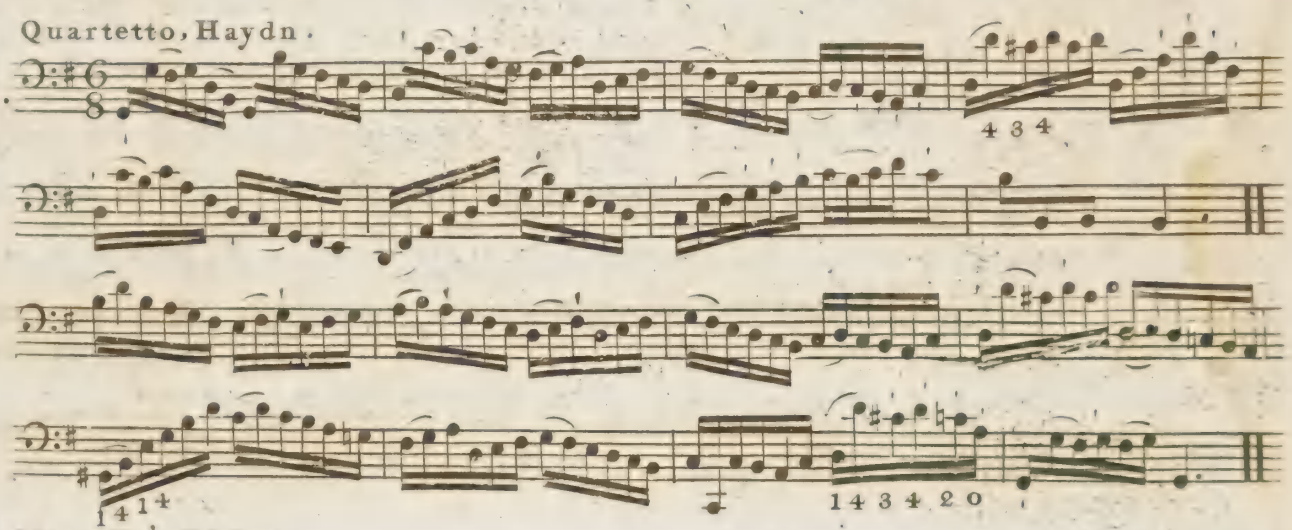


87. Vivace.



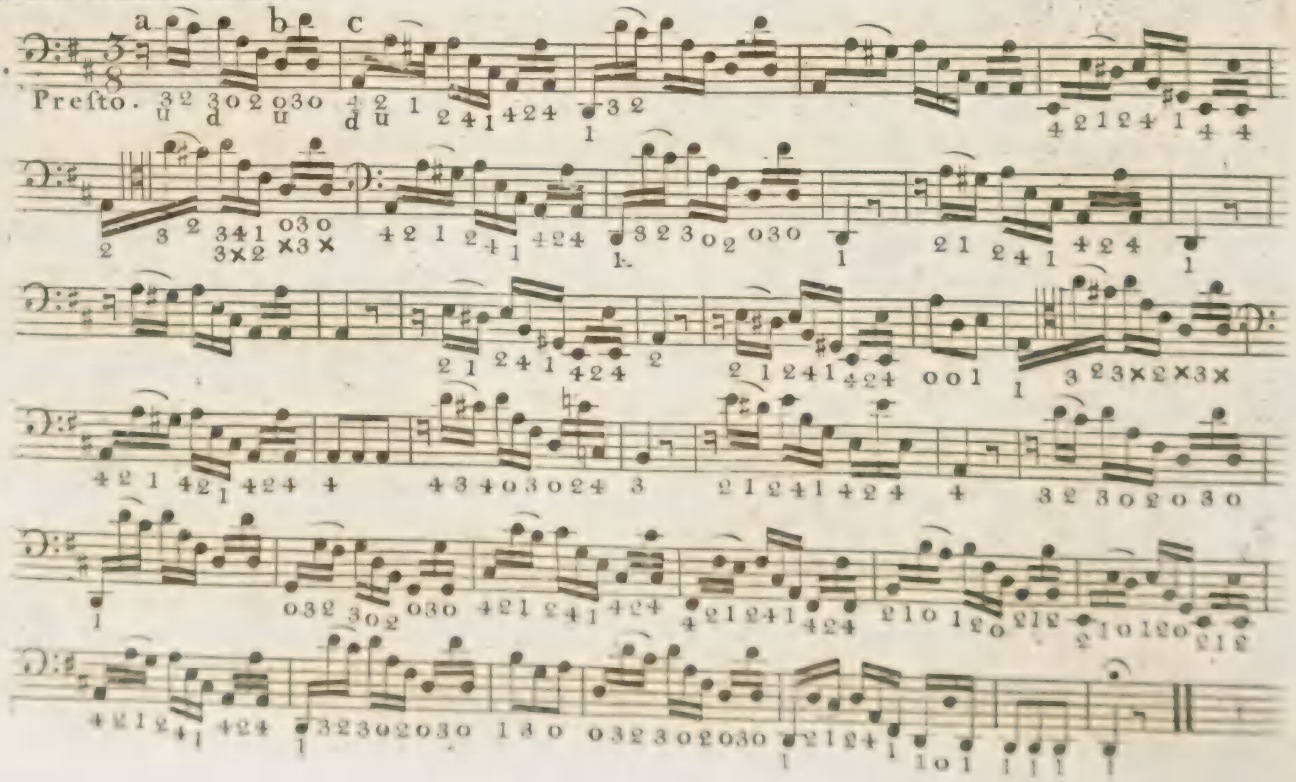
Quartetto, Haydn.

88.



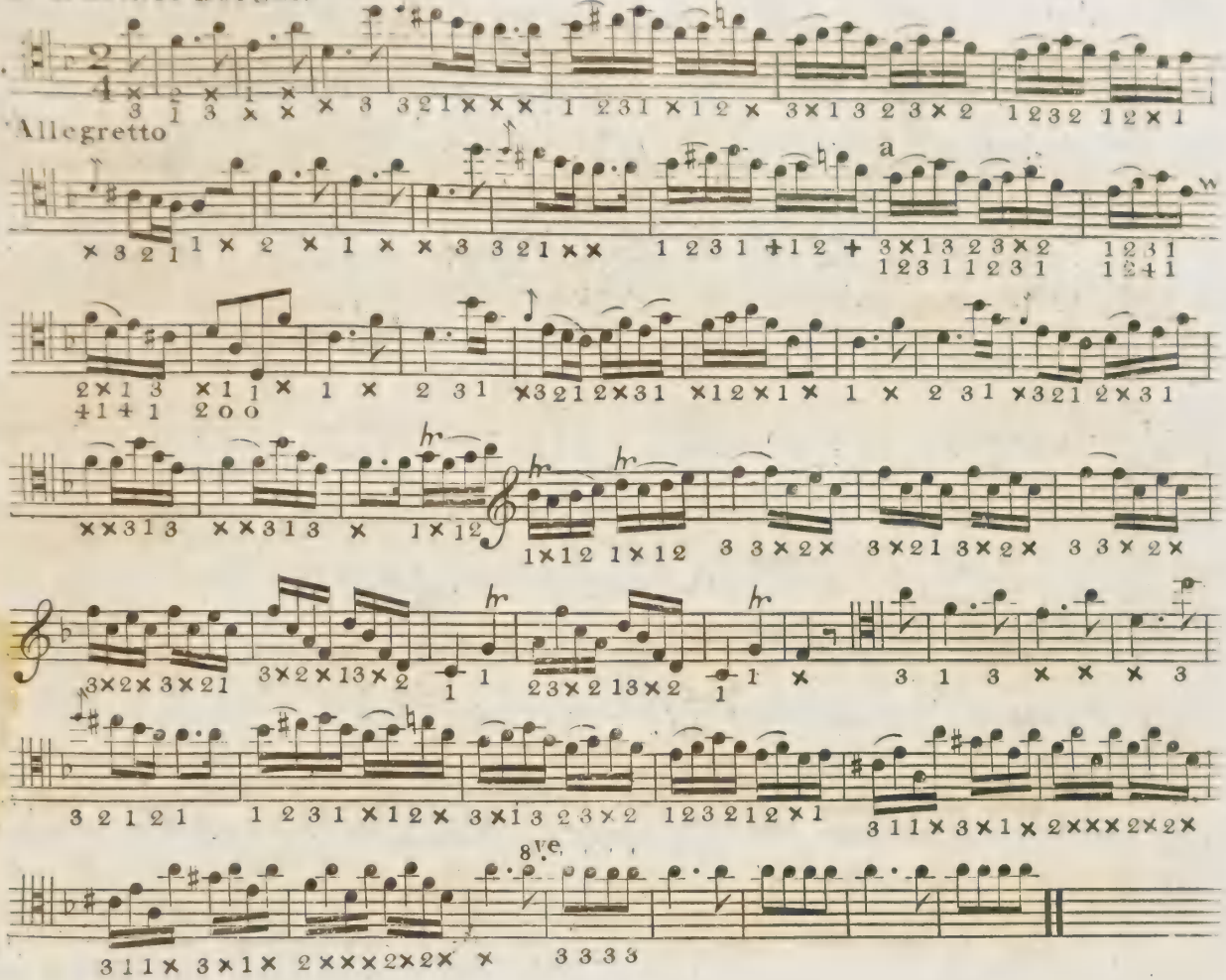
Marcello's, Pfalms.

89. Preſto.



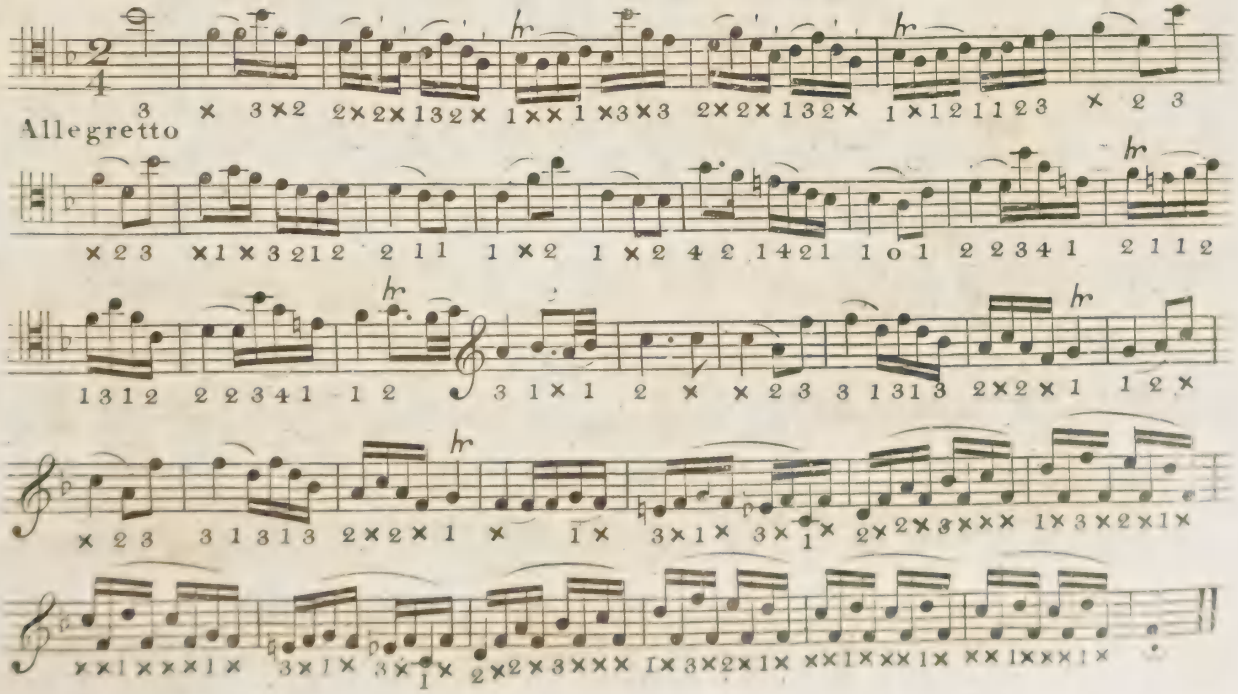
3d Duett, of Borghi.

90.



2d Duett, of Borghi.

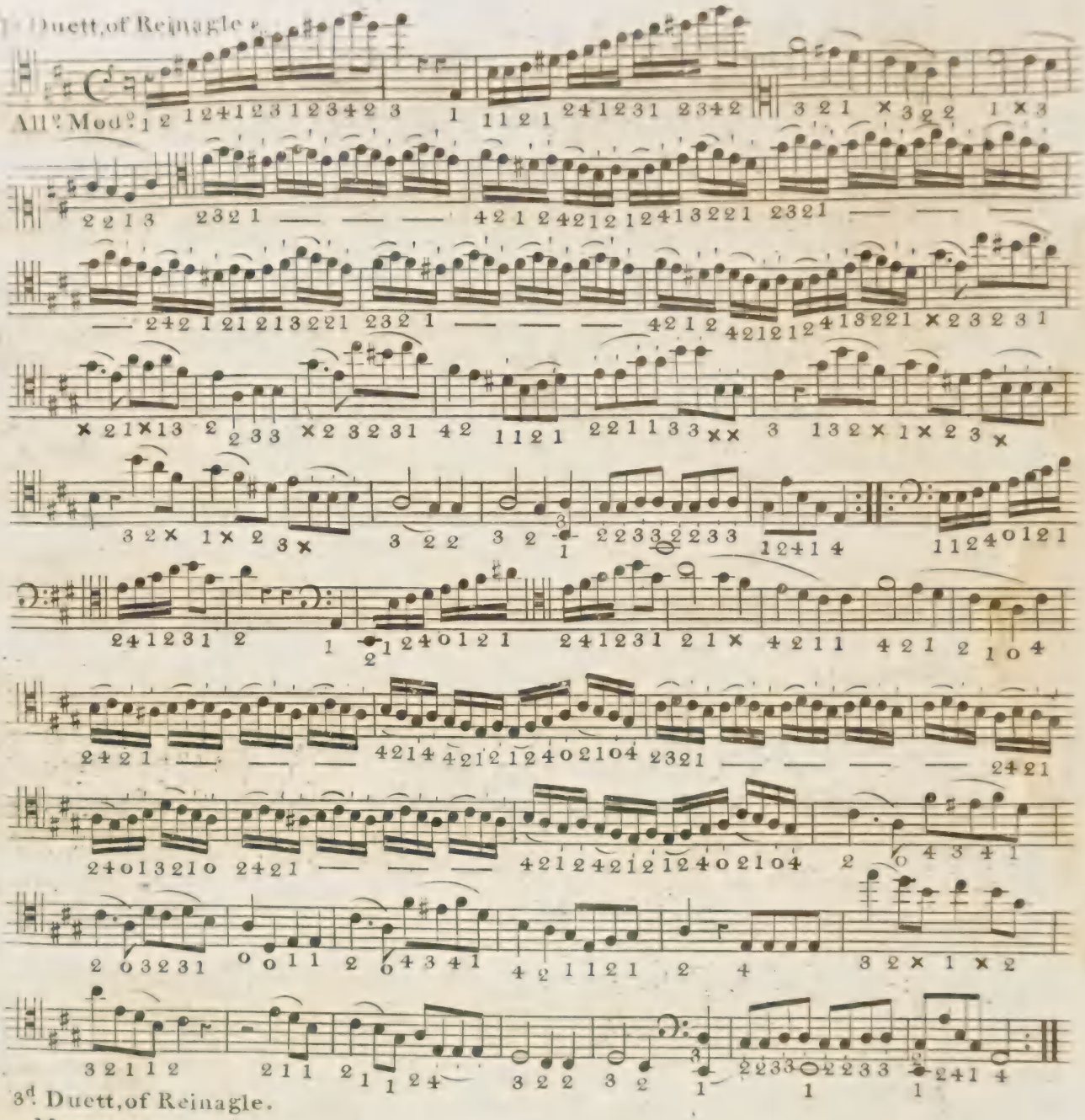
91.



2d Duett, of Reinagle.

92.

All.o Mod.o

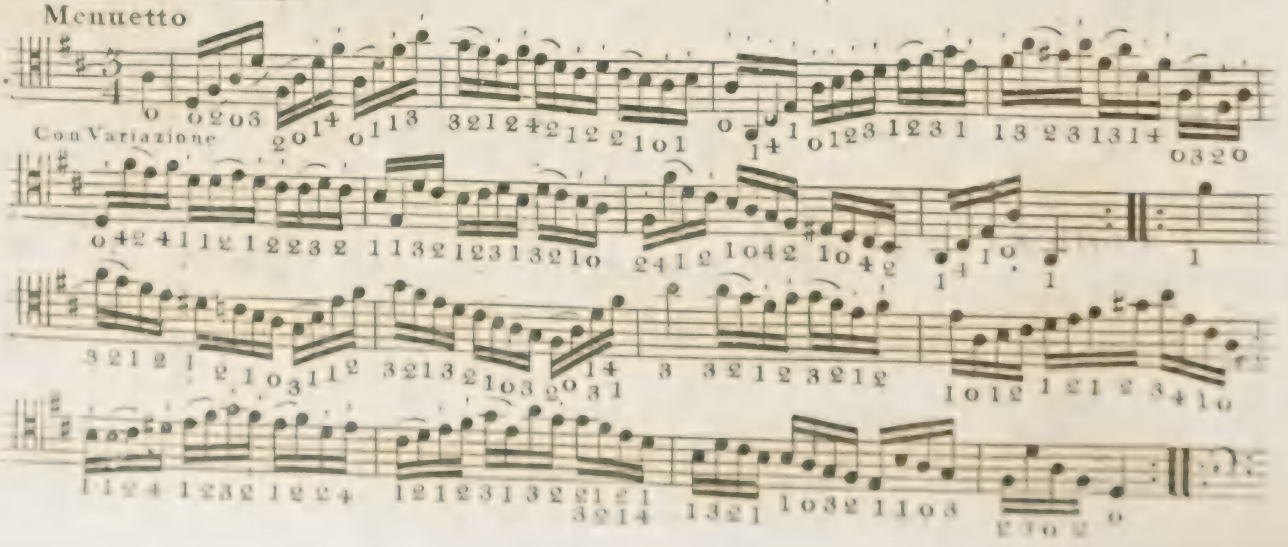


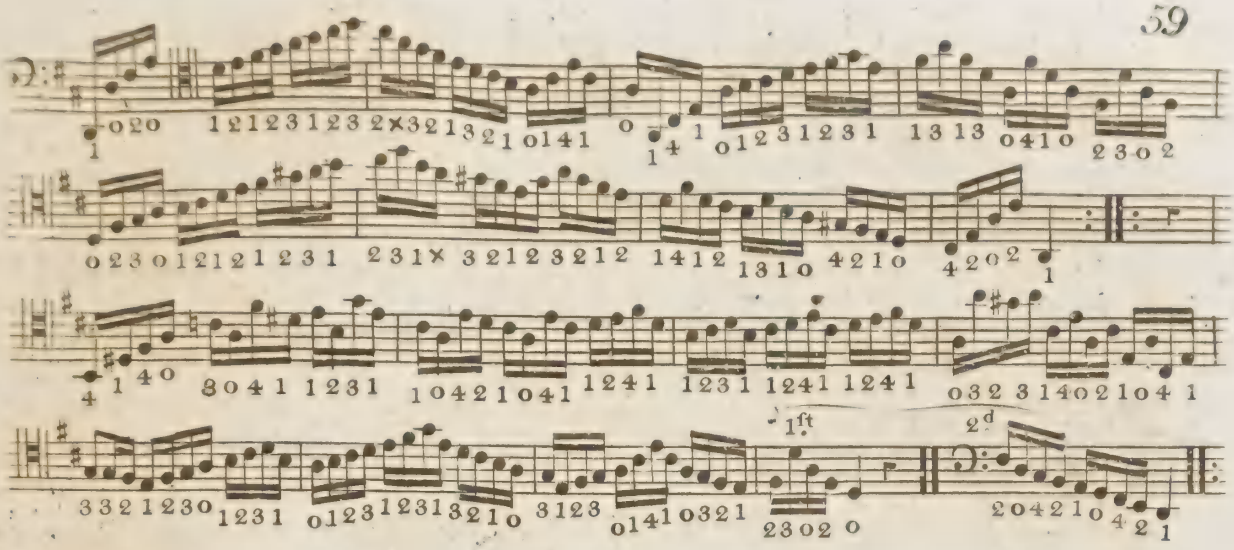
3d Duett, of Reinagle.

Menuetto

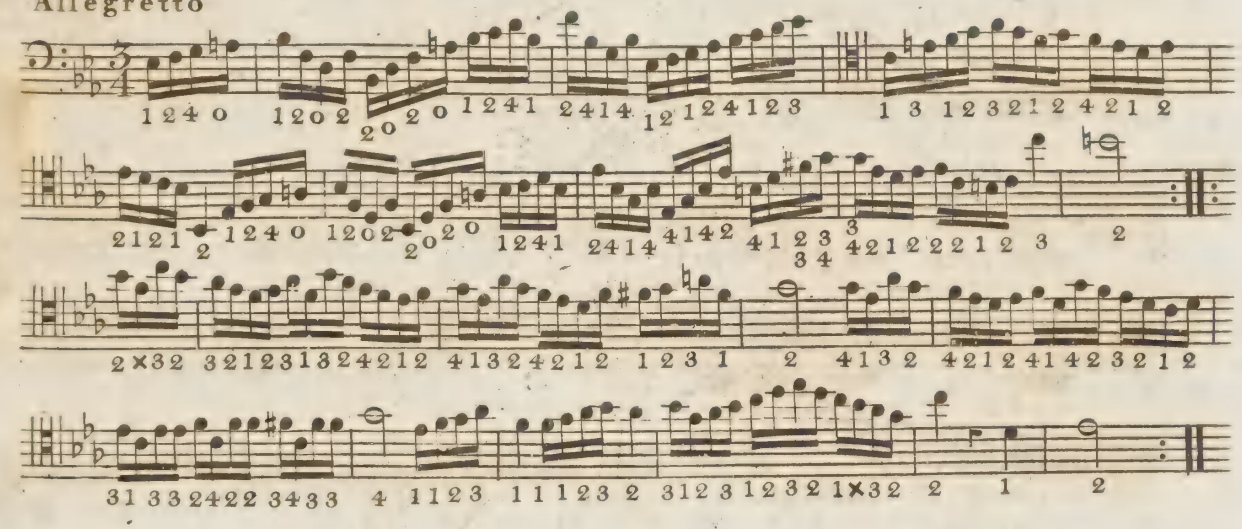
93.

Con Variazione



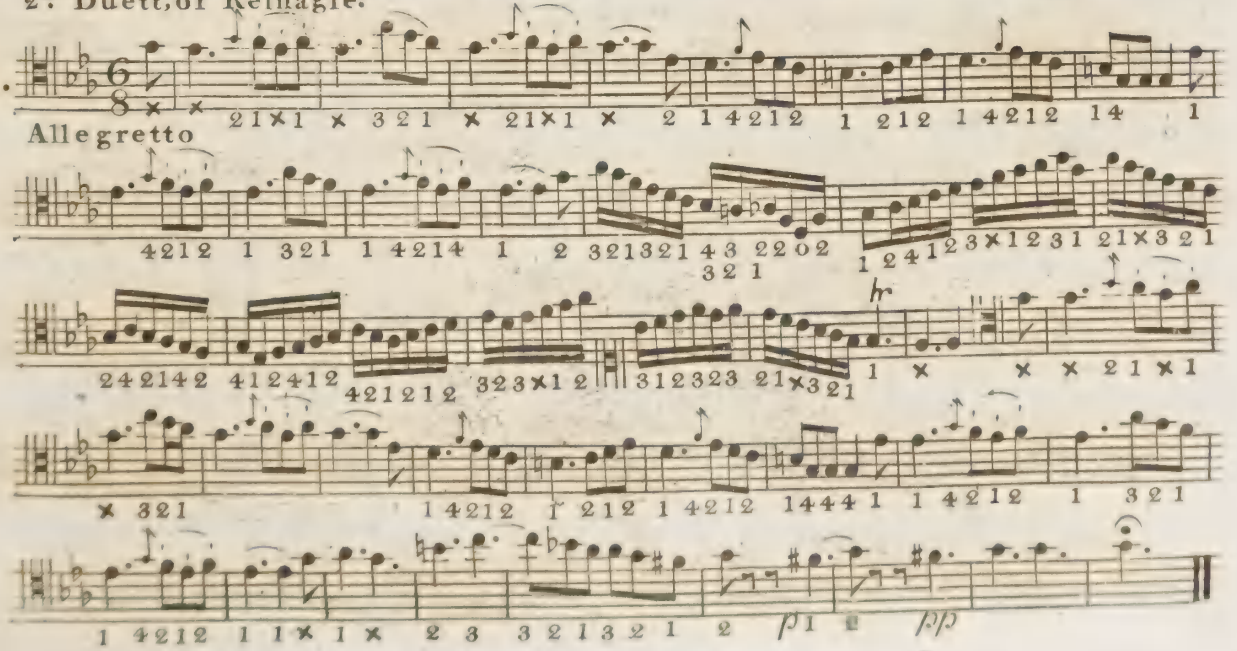


Allegretto



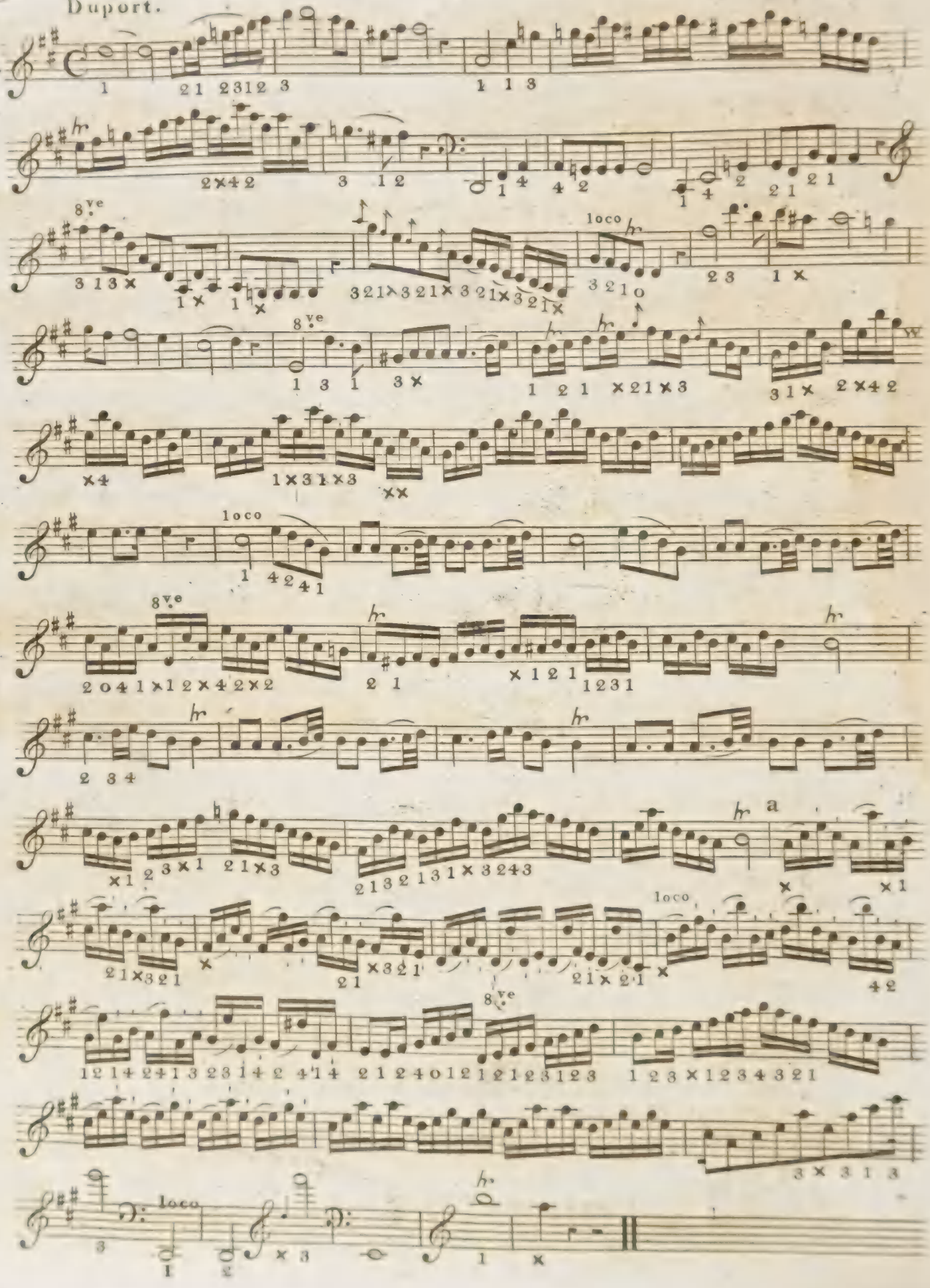
2d. Duett, of Reinagle.

94.

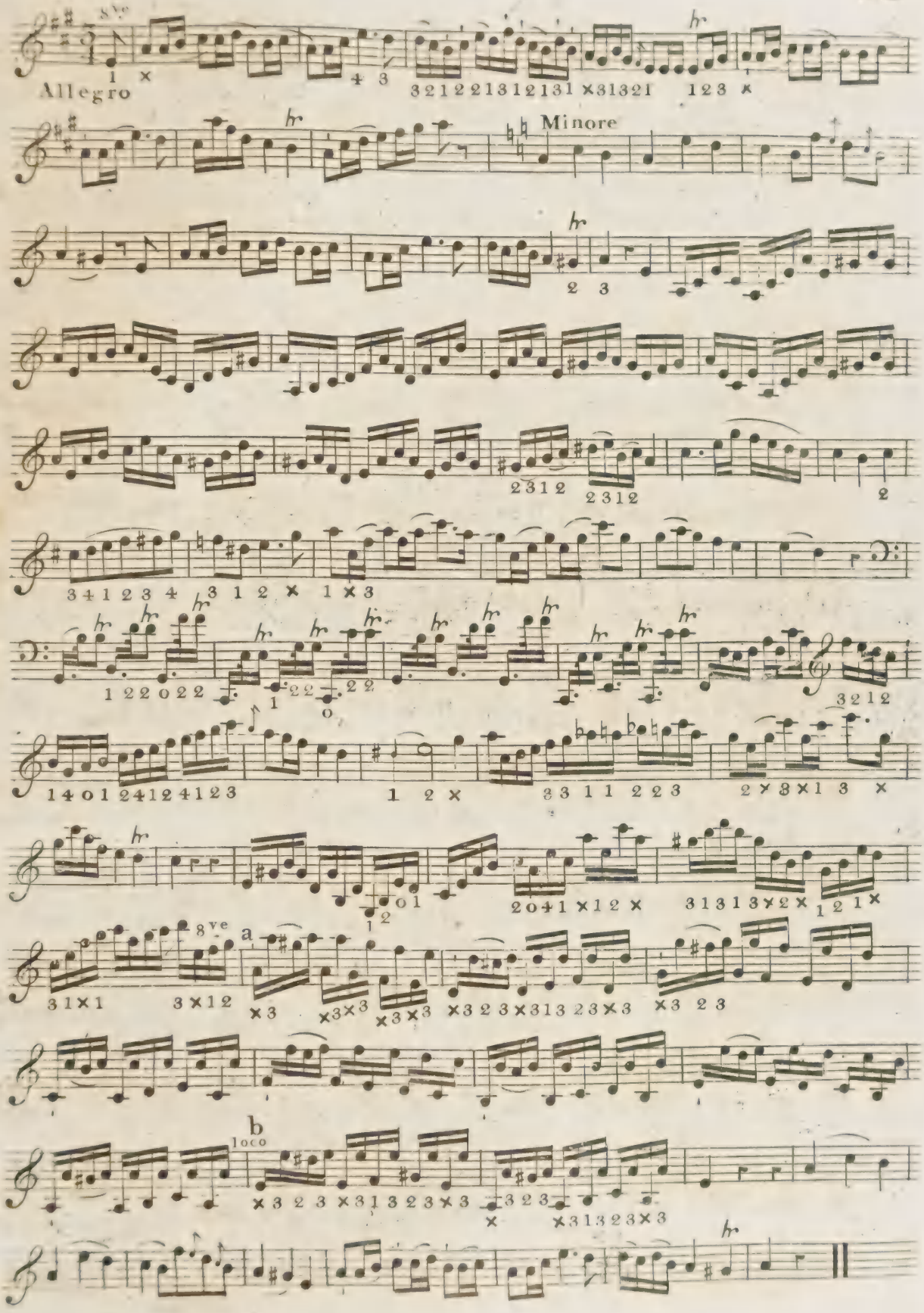


Duport.

95.

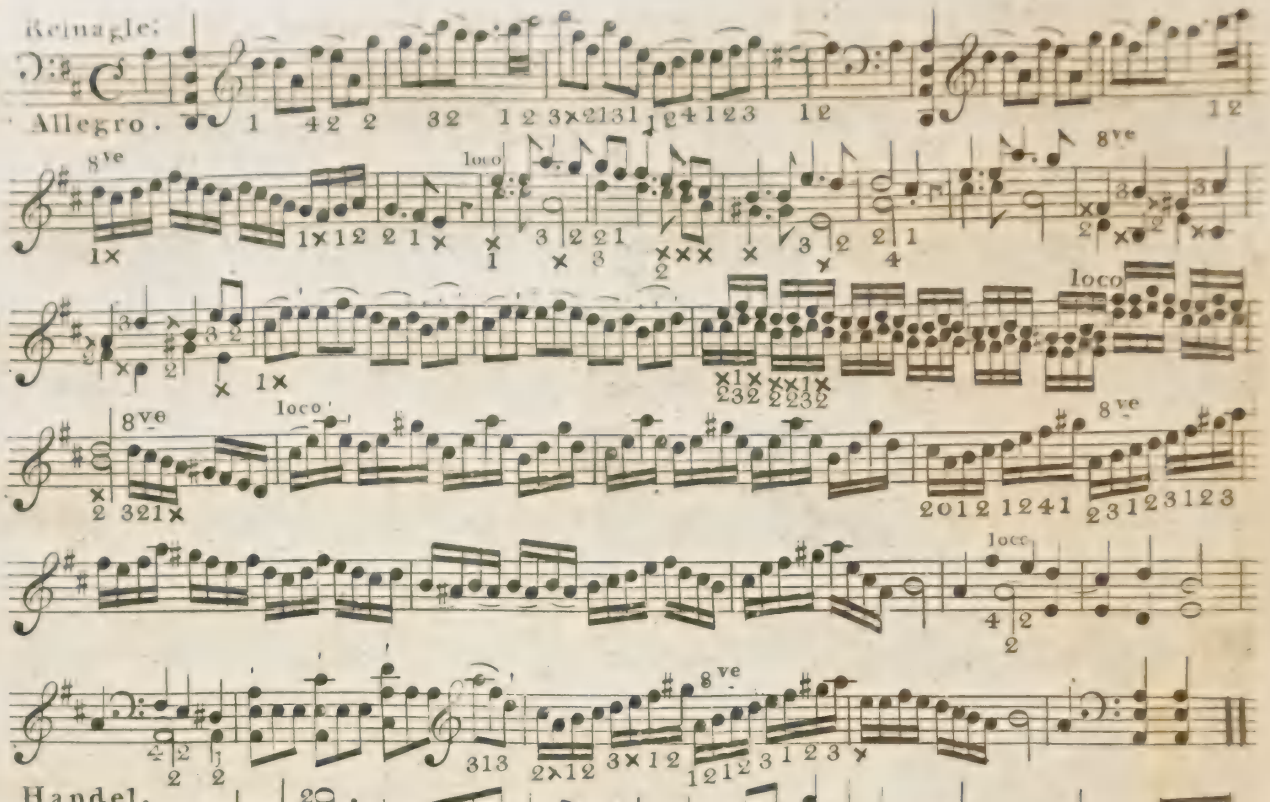


96.

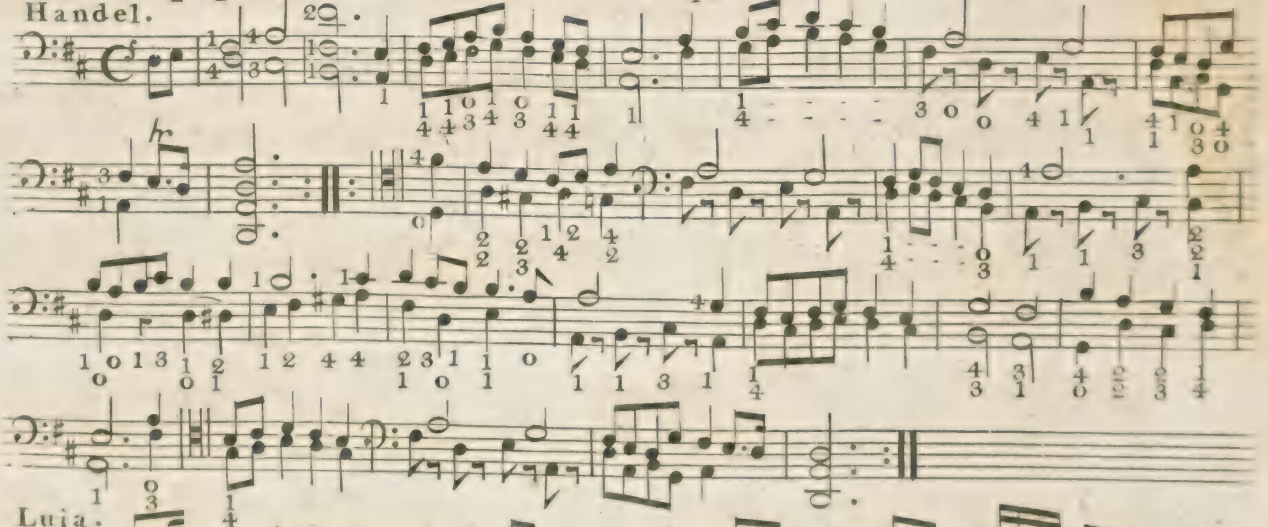


97. Reinagle:

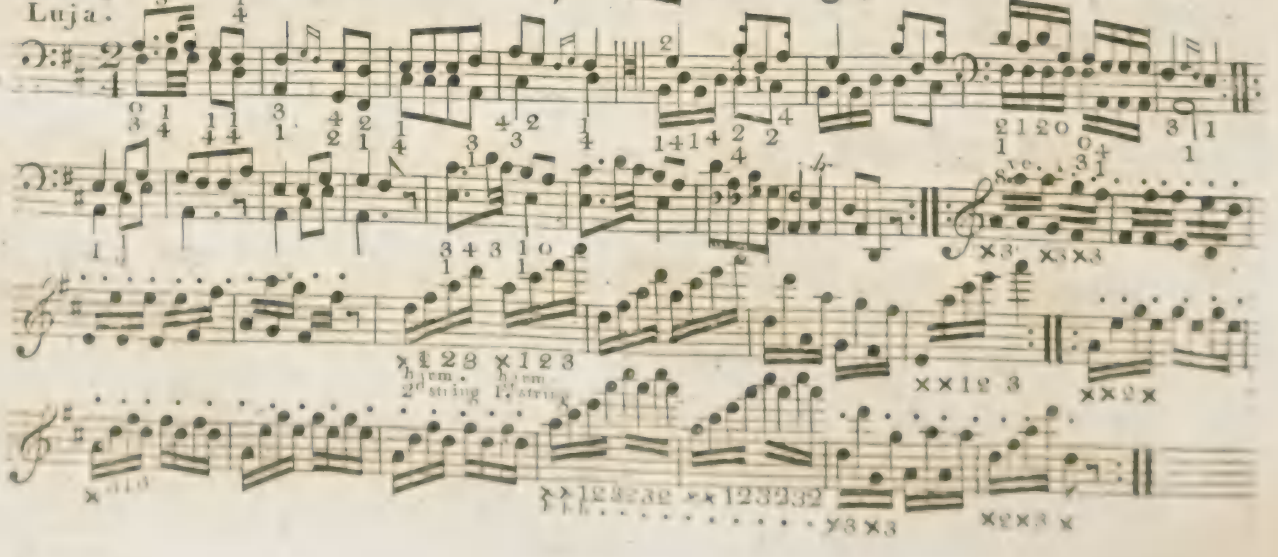
Allegro.



98. Handel.

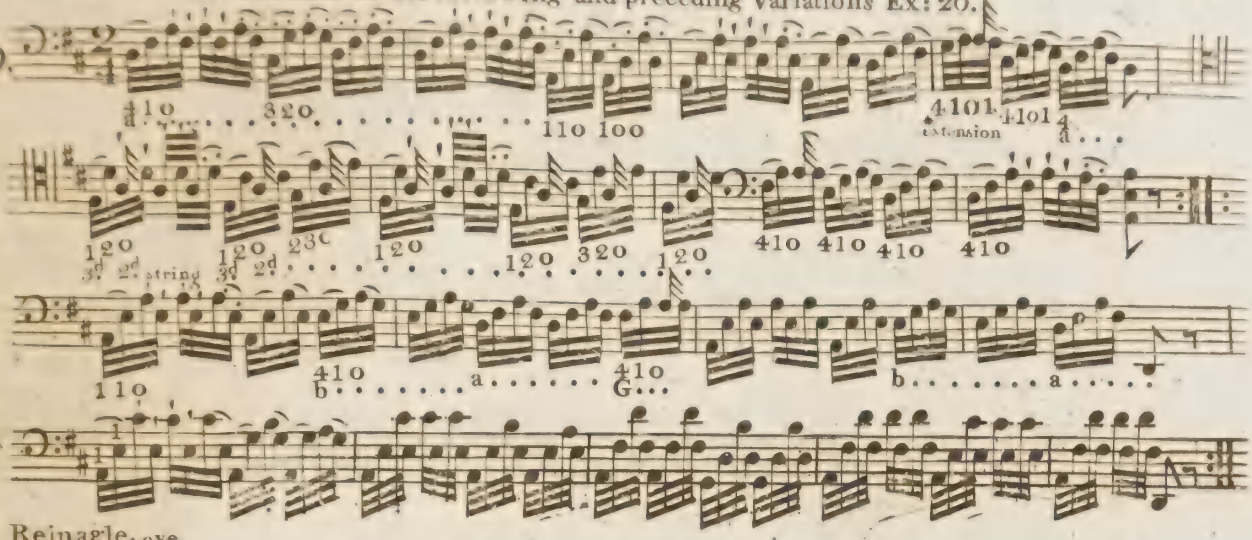


99. Luja.



See the Air and bass of the following and preceding Variations Ex: 20.

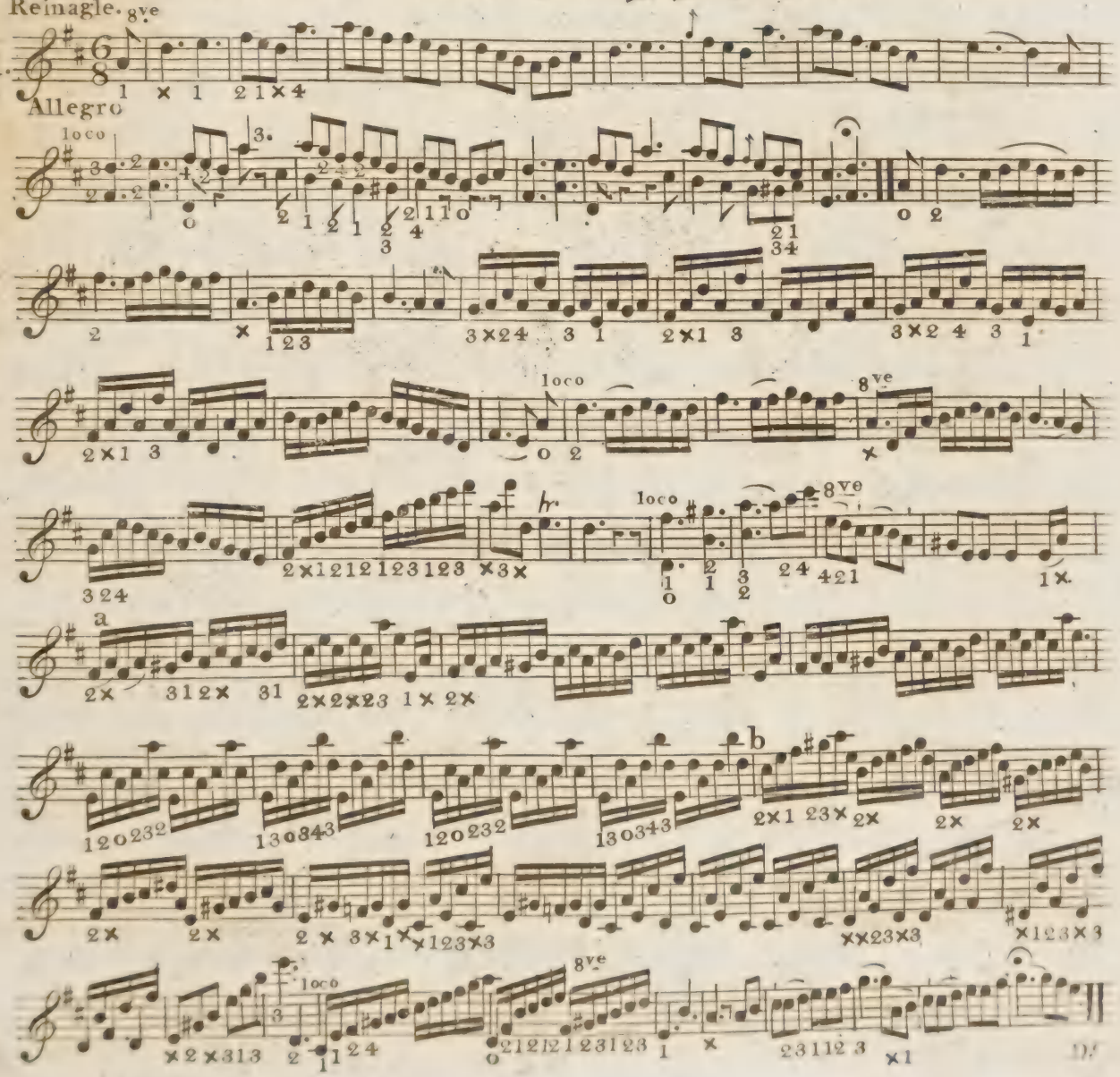
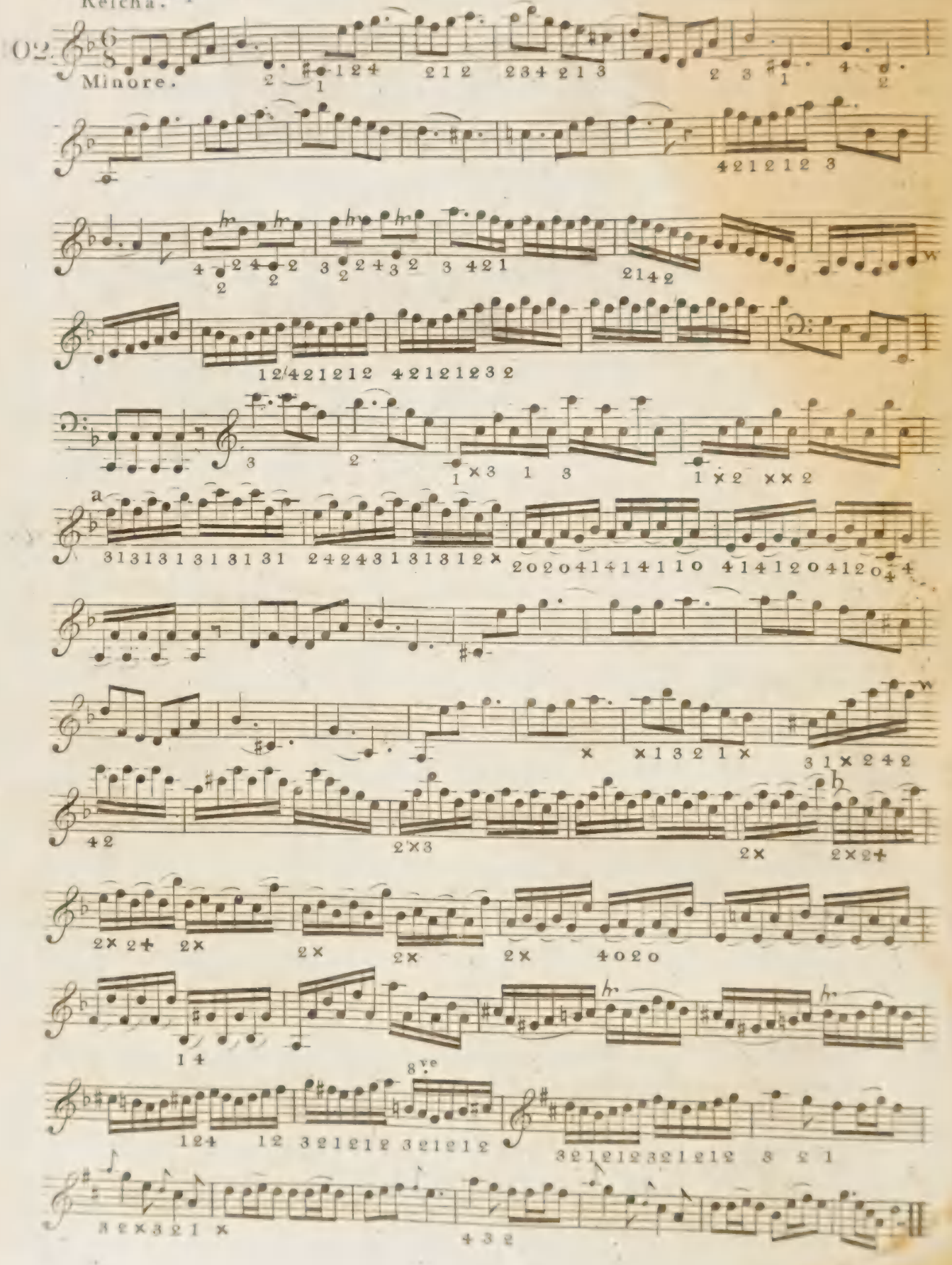
100.



Reinagle.

101.

Allegro



Reicha.